ELECTRICAL SOUTH

OCTOBER 1951

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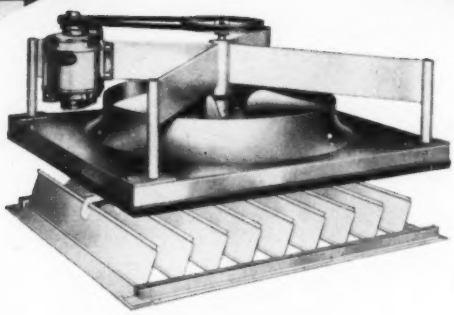

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- Automatic ceiling shutter
- Certified P.F.M.A. air ratings
- Hunter highest quality construction
- Quiet and powerful
- Easiest of all to install
- Fits low ceiling attics
- No suction box needed
- 2 sizes: 4750 CFM and 6800 CFM

● Other models with 7700 CFM and 9700 CFM

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by Wakefield
In-Place Assembly
Wakefield
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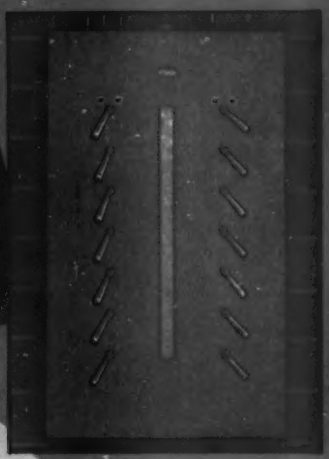
Volume 31 Number 10

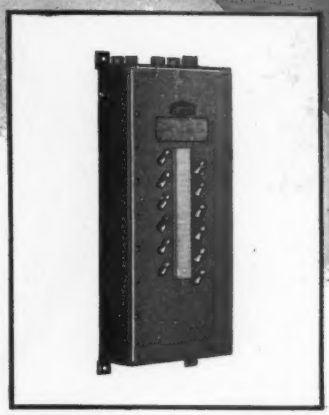
Where DUST is a HAZARD

INSTALL FA DUSTITE PANELBOARDS



Above is a typical FA DUSTITE feeder panelboard, and below a FA DUSTITE Lighting panelboard. Both are Underwriters Laboratories' approved for Class II, groups E, F, & G, Hazardous locations.

Similar vapor-proof (not explosion proof) type panelboards are also made by FA



Here's maximum protection where volatile dust presents a hazard in the distribution of power and light. Regardless of external dust conditions, FA DUSTITE Panelboards provide safe, dependable performance because *they are dust-free inside.*

Dust is sealed out by means of welded hubs for conduit outlets . . . welded box corners . . . external mounting brackets . . . and a solid steel front plate with gasket protection all around.

FA Dustite panelboards are of the automatic circuit breaker type, which provide protection without a need for replacement of any parts. Circuit breakers are externally-operated by a Dustite mechanism of FA design. Handles operate through dustite bushings and engage the handle of the circuit breaker *inside* the cabinet. ON, OFF and TRIPPED positions are indicated on the front of the cabinet.

So don't take chances where dust is a hazard. Install an FA DUSTITE Panelboard. Should you want additional information, contact your nearest FA representative, listed in Sweets, or write for bulletin No. 302.

Capacities of FA DUSTITE Panelboards are 15 to 600 amps, 250 volts AC or DC and 600 volts AC main lugs only, or main circuit breaker.

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Frank Adam Electric Co.

P. O. BOX 357 ST. LOUIS 3, MO.

Makers of BUSDUCT • PANELBOARDS • SWITCHBOARDS • SERVICE EQUIPMENT • SAFETY SWITCHES • LOAD CENTERS • QUIKHETER

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SERVING THE 18 SOUTHERN AND SOUTHWESTERN STATES

October, 1951 — Vol. 31 – No. 10

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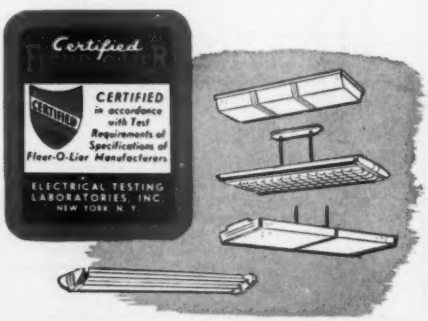
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FOR LIGHTING PERFORMANCE

Here are a few typical items from the comprehensive line of standard and specialty lighting products for use in Hospitals — Schools — Post Offices — Public Buildings and other commercial interiors.

Architects and Engineers: Contact your nearest Perfeclite representative for catalog showing entire line fully illustrated with complete specifications.

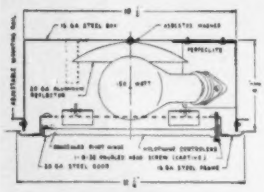
Nos. 140-UNS to 144-UNS

CEILING PAN

Cat. No.	Dia. Bowl	No. Skts.	Watts Per Skt.
140-UNS	8"	2	40 w.
141-UNS	10"	2	75 w.
142-UNS	12"	3	60 w.
143-UNS	14"	3	75 w.
144-UNS	16"	4	60 w.

FINISH: Satin Aluminum

ALL PERFECLITE CEILING PAN TYPE UNITS ARE APPROVED UNDER REVISED UNDERWRITERS' STANDARDS FOR 1951.



Cross Section

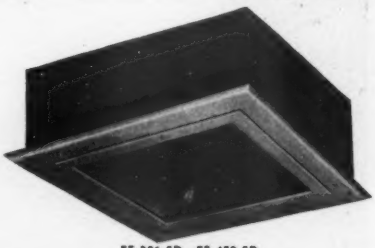
EF-386-SD

PSYCHOPATHIC WARD UNIT FLUSH HI-STRESS CONTROLENS*

Cat. No.	Controlens	Max. Watts	Night Light Watts
EF-386-SD	8½"	150	15
EF-450-SD	12"	300	15

Length	Width	Depth	Face Plate
10½"	10½"	4½"	11¼" sq.
14⅛"	14⅛"	6"	15¾" sq.

STANDARD FINISH: Baked Luminescent Silver



EF-386-SD—EF-450-SD

HOSPITAL BED LIGHT HI-STRESS CONTROLENS*

HBL-3

Max. Wattage — Std. Pkg. Wt.
60-w below; 100-w above — 1 — 9 lbs.

DIMENSIONS: 7" high x 12½" wide; extends 5⅞" from wall.

STANDARD FINISH: Baked Luminescent Silver

HOLOPHANE PRISMATIC GLASS REFRACTOR*

ASY-73

No.	Curve	Watts	O.A. Dia.	O.A. Depth
SYM-71	Symmetric	100	13⅜"	6⅛"
ASY-73	Asymmetric	100	13⅜"	6⅛"

Hinged for relamping.

STANDARD FINISH: Satin Aluminum

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CATALOGS and BULLETINS

Available Free to Readers of Electrical South upon Request

(Additional items will be found on pages 103 and 105)

1008—Electrical Equipment. The latest edition of the Federalog has just been issued by Federal Electric Products Co., 60 Paris St., Newark 5, N. J. This profusely illustrated catalog contains complete details of Federal's newest motor controls, safety switches, service equipment, circuit breakers, panelboards, switchboards, and busduct.

1028—Porcelain Insulators. A loose-leaf catalog of porcelain insulators and pole line hardware is available from Illinois Electric Porcelain Co., Macomb, Illinois. In addition to the pages of product specifications, the catalog contains a special section of useful tables.

1030—Condensed Lighting Catalog. This 8-page descriptive bulletin issued by Pittsburgh Reflector Co., 450 Oliver Bldg., Pittsburgh 22, Pa., describes in detail the most popular items in the Pittsburgh line of fluorescent and incandescent lighting equipment. Each item is fully illustrated and cataloged, and many are accompanied by installation drawings.

1032—Receptacles, Plugs, and Connectors. Russell & Stoll Co., Inc., 125 Barclay St., N. Y., has released a bulletin No. EL-4-46, describing the new Ever-Lok receptacles, plugs and cord connections for 30 amperes, 440 volts, a-c. Typical uses are for heavy duty industrial purposes.

1034—Building Wire. A fully illustrated 48-page booklet called "Hazard Building Wires" is now available from the Hazard Insulated Wire Works Division of The Okonite Co., Wilkes-Barre, Pa. The manual contains complete engineering information on the many types of wire and cable required by the building industry. Tables showing dimensions and weights of all cable constructions are included.

1042—Wire and Cable. An illustrated booklet containing descriptions of thermoplastic building wires, rubber-insulated and leaded building wires and cables, Flamenol cords, rubber cords, Neoprene cords, and many other items has been published by the General Electric Co., Bridgeport 2, Conn.

1048—Plug-In Strip. A complete revision of Catalog CF-2 has recently been published by National Electric Products Corp., Pittsburgh, Pa. This 8-page, illustrated brochure pictures the 3 ft. and 6 ft. standard lengths of the redesigned multi-outlet branch circuit assembly. Several pages are devoted to detailed instructions for cutting the Plug-In strip on the job.

1054—Fluorescent Fixtures. Catalog No. 48 illustrates the commercial, industrial and residential designs offered by the Kayline Co. Featured are troffers, glass and louver type, recessed incandescent units, and many others. The catalog is available from the Kayline Co., 2480 E. 22nd St., Cleveland 15, Ohio.

1058—Conductor Fittings. A complete catalog, illustrated and listing prices, has been issued by Penn-Union Electric Corp., Erie, Pa. Described is the company's complete line, including a wide variety of service connectors, terminals, tees, and taps; also many other types of conductor fittings.

1068—Wire and Cable. Rome Cable Corporation, Rome, N. Y., has just published a new "Bare and Weatherproof Wire and Cable" catalog, No. 22. By word and picture the story of Rome wire and cable including specifications and a technical section, is brought to the reader.

1076—Modular Lighting. A 20-page booklet containing interesting and useful information about the "modular system" of lighting can be obtained by writing to the Mitchell Manufacturing Co., 2525 Clybourn Ave., Chicago 14, Ill.

1082—Lighting Equipment. Just off the press is Catalog No. 50, available from the F. W. Wakefield Brass Co., Vermilion, Ohio. The catalog covers full engineering data on fluorescent equipment in luminous indirect and direct-indirect for both standard and Slimline lamps.

1086—Connectors and Couplings. Tomic Sales and Engineering Co., 4864 Woodward Ave., Detroit 1, Mich., now have available catalog sheets containing data on the complete line of their connectors, couplings, and cable connectors.

1088—Fittings and Fixtures. A 24-page illustrated catalog covering Killark fittings and fixtures is offered by Killark Electric Mfg. Co., Vandeventer and Easton Aves., St. Louis 13, Mo.

ELECTRICAL SOUTH
806 Peachtree St., NE
Atlanta 5, Ga.

October, 1951

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Please send me the bulletins and catalogs indicated.

(Print Plainly)

Name..... **Title**.....

Company.....

Address.....

City & State.....

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1164	1166	1168	1170	1172
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all 4 advantages you want

in a fluorescent lampholder...

exclusive with Benjamin... *yours at no extra cost!*

In a fluorescent lampholder, the four advantages you want most... the four features that you would include were you designing a lampholder of your own... are *yours* with Benjamin "Springlox." Benjamin brings you this exclusive, patented advancement at no additional lighting equipment cost!

These four most-wanted features bring you everything you require of a fluorescent lampholder: longer life, better electrical contact, speedier relamping and all-around simpler, quicker, safer lighting maintenance.

You get these four most-wanted features exclusively with Benjamin. They are yours as "standard equipment" with every Benjamin Industrial Fluorescent Lighting Unit, whether it uses two T12 lamps or three, bi-pin or single-pin lamps, for individual units or continuous line construction.

*Exclusive with all** BENJAMIN FLUORESCENT UNITS

BENJAMIN "Springlox" lampholders

sold exclusively through electrical distributors

1 "Built to take it" RUGGEDNESS Practically indestructible ALL-METAL construction. NO BREAKAGE... no out-of-service time due to socket failure. Lamps CUSHIONED against shock and vibration.

2 SAFETY Whether installed in a steel mill or office, lamps cannot drop out or be shaken loose, because "Springlox" is SELF-ADJUSTING for slight differences in lamp length.

3 "Quick-in, quick-out" LAMP SERVICING Makes lamp servicing simpler for all T12 fluorescent lamps. "Finding ring" makes possible "ONE-HAND" lamp insertion of bi-pin lamps.

4 "Never-fail" ELECTRICAL CONTACT Never fails to make contact the *first time*. "Easy-make, easy-break" circuit switch built into single-pin type. Separate springs for electrical contact and locking compression.

Single-pin type "Springlox" for 2 or 3 lamps

Bi-pin type "Springlox" for 2 or 3 lamps

transparent view of "push snug" shows how flexible spring base simplifies lamp insertion.

*"Springlox" lampholders are designed to accommodate all T12 Lamps for industrial use.

Send for **FREE "SPRINGLOX" DATA BULLETIN!** Tells you more about time and labor savings made possible by "Springlox"-equipped Benjamin Fluorescent Lighting Units. For your free copy, write: Benjamin Electric Mfg. Co., Dept. 2-1, Des Plaines, Ill.

R5680S

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All of these, and many other conditions for proper lighting of defense plants can be met through the specification of RLM-Labeled Lighting Units. All units bearing the RLM Label are warranted by Electrical Testing Laboratories to conform to the minimum standards established by the RLM Standards Institute for efficiency, durability and uniform quality.

FREE RLM BOOKLETS containing complete specifications for all RLM-Certified Industrial Fluorescent and Incandescent Lighting Units and the names of all manufacturers of RLM-Labeled Units may be obtained by writing: RLM STANDARDS INSTITUTE INC., Suite 828, 326 West Madison Street, Chicago 6, Illinois.

Specification of RLM-Labeled Units Assures Conformance to ALL these Essentials of Defense Production Lighting

DIFFUSION WITH HIGH REFLECTION FACTOR
RLM Porcelain-Enameled Steel Reflectors must have a mean reflection factor of 82% . . . an assurance of more light for the money. Porcelain enamel reflecting surfaces *diffuse* light from the lamp and help provide proper *quality* of illumination.

TOP QUALITY PORCELAIN-ENAMELED REFLECTORS
RLM Reflectors are built of not less than .032" reflector steel covered with .025" fused on porcelain enamel that will not chip, corrode or deteriorate under industrial operating conditions.

APPROVED REFLECTOR DESIGN
Reflector design of RLM Units conforms to specifications embodying approved practices of illuminating engineering.

HIGH POWER FACTOR BALLASTS
RLM Standards specify the use of certified ballasts which last longer, because they are designed to prevent excessively high temperature operation.

UNIFORM QUALITY
RLM Standards insist on the maintenance of uniform quality as to materials and construction, thus assuring the buyer of uniform lighting performance from each unit installed.

RLM STANDARDS INSTITUTE
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The letters RLM stand for Reflector and Lighting Equipment Manufacturers

R5516

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....SO

National Electric developed

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"We need a small, all-purpose electrical raceway . . ."

"Low cost . . . Low Maintenance . . ."

"Safe . . . Light . . . Strong"

". . . electrical modernization"

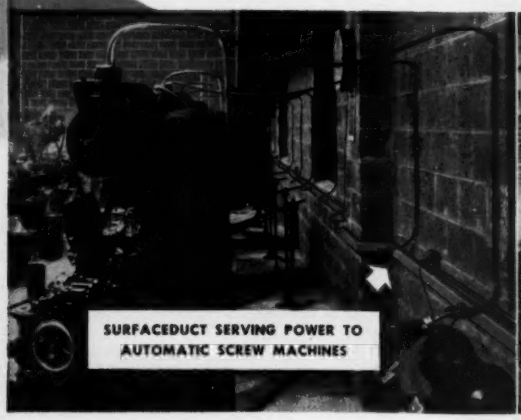
". . . for flexible lighting arrangements"

"No fishing . . . Unobstructed wiring channels"

"Easily installed . . . Completely accessible . . ."

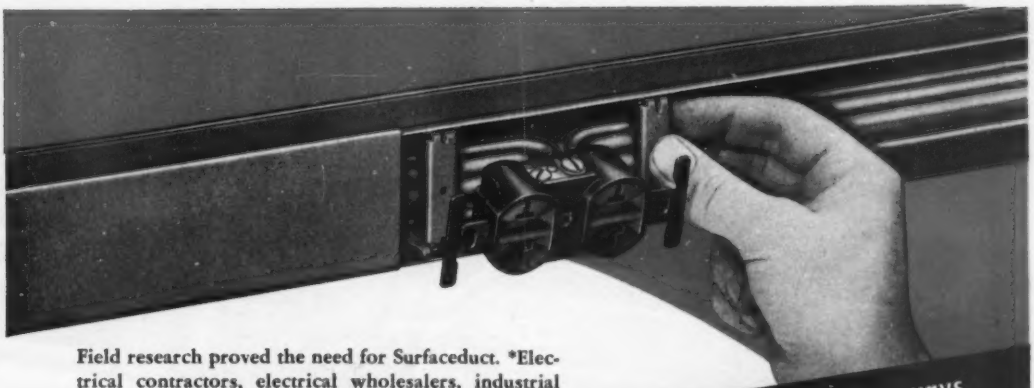
"Easily rerouted . . . Minimum of fittings . . ."

Pioneering is Simply Doing the Obvious FIRST



SURFACEDUCT SERVING POWER TO AUTOMATIC SCREW MACHINES

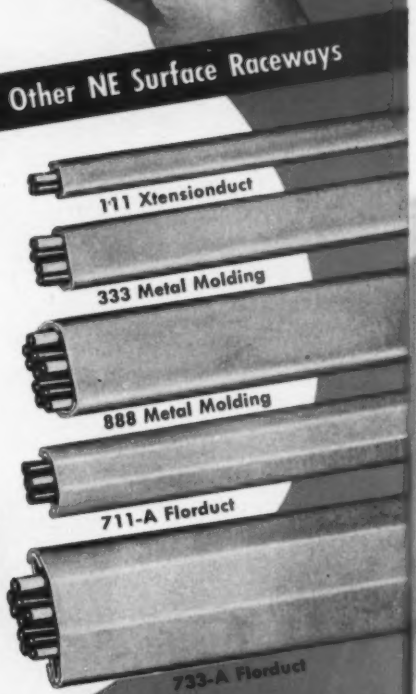
SURFACEDUCT LIGHTING AND POWER APPLICATION



Field research proved the need for Surfaceduct. *Electrical contractors, electrical wholesalers, industrial engineers, plant maintenance men, architects—all told us what they wanted in a general purpose electrical raceway system.

Surfaceduct was designed in strict accordance with the advice and suggestions of these men in the electrical field who were to install or specify it. The engineering "know-how" National Electric had attained as pioneer manufacturer of surface raceways took Surfaceduct from the blueprint stage to production and on to an enthusiastic reception by the electrical trade.

Today, only six short years after its introduction, Surfaceduct is efficiently serving electrical applications requiring light or power up to 60 ampere service. Surfaceduct is another versatile product of National Electric, the world's largest producer of the *complete line* of secondary electrical distribution systems.



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PRODUCTS CORPORATION
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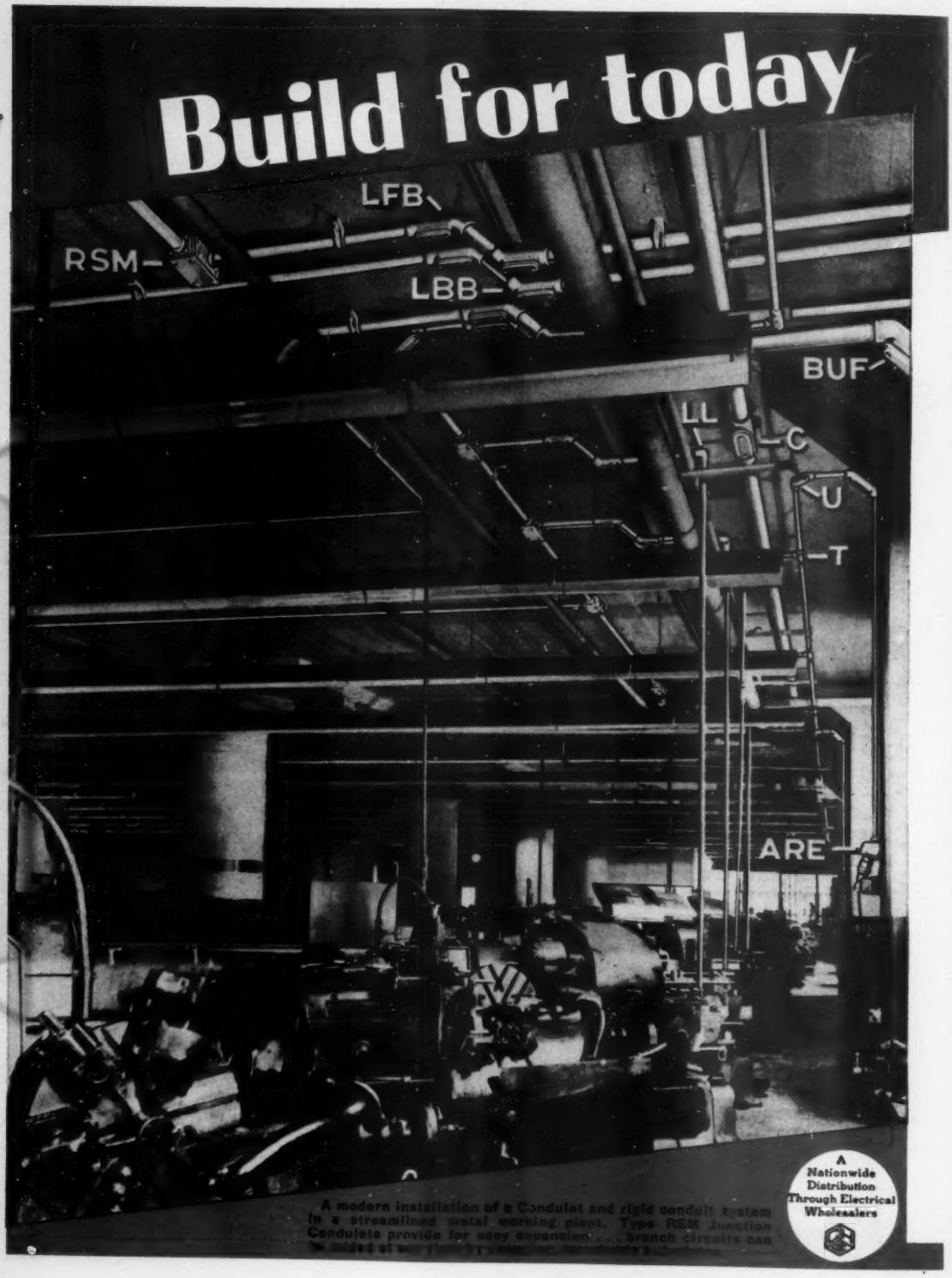


A modern installation of a Condulet and rigid conduit system in a streamlined metal working plant. Type RSM Junction Condulets provide for easy expansion . . . branch circuits can

... and tomorrow

A modern CONDULET* and rigid conduit installation gives you enduring protection

PLUS

the flexibility to meet tomorrow's needs

Type RSM Junction Condulets RS Series take 4 detachable hub plates with up to 3 hubs for conduit from ½" to 3½"

Type LF B Obround Condulet

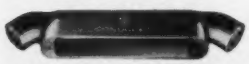
Type LB B Obround Condulet

Type LL Obround Condulet

Type C Obround Condulet

Type U Obround Condulet

Type T Obround Condulet



Type BUF Mogul Condulet Mogul Series are for use where larger openings are needed for pulling large conductors

Type ARE Arktite Plug Receptacle

The most important consideration in an electrical installation is continuous plant operation through the years. Crouse-Hinds sturdy cast Feraloy CONDULETS and rigid conduit provide the best possible mechanical protection against accidental damage to electrical wiring and equipment.... prevent costly shutdowns.

Next in importance is flexibility to meet the needs of today's fast moving industry. A modern CONDULET installation provides for growth and changing conditions. CONDULETS with detachable hub plates make it easy to change circuits or add new ones at any time.

In addition to protection and flexibility, a CONDULET installation gives you these definite advantages:

- **ECONOMY.** The installed cost of Crouse-Hinds CONDULETS and rigid conduit compares favorably with other wiring methods. The added advantages make it the really economical method that pays dividends over the years.
- **SAFETY.** Ground continuity is of vital importance. CONDULETS with taper threaded hubs and rigid conduit with tapered threads make a secure joint that provides a reliable and permanent low resistance path to ground. This safety feature assures maximum protection against personal injury and fire.
- **CORROSION RESISTING.** Cast Feraloy CONDULETS give the best protection wherever moisture, dust, or corrosive atmospheres are present.
- **UNIVERSAL APPLICATION.** You can install galvanized CONDULETS and galvanized rigid conduit under all atmospheric conditions and in all occupancies.
- **QUALITY.** The trademark CONDULET stands for the highest quality, reliability, and long life.
- **VARIETY.** More than 15,000 items are listed in the CONDULET Catalog, including a complete explosion-proof and dust-tight line for use in hazardous locations.

On YOUR next electrical layout, plan to get all the benefits of sturdy cast Feraloy CONDULETS and rigid conduit . . . the universal wiring method.

CROUSE-HINDS COMPANY
Syracuse 1, N. Y.

OFFICES: Albuquerque—Birmingham—Boston—Buffalo—Chicago—Cincinnati—Cleveland Dallas—Denver—Detroit—Houston—Indianapolis—Kansas City—Los Angeles—Milwaukee Minneapolis—New York—Philadelphia—Pittsburgh—Portland, Ore.—San Francisco Seattle—St. Louis—Washington. RESIDENT REPRESENTATIVES: Albany Atlanta—Baltimore—Charlotte—New Orleans—Richmond, Va. Crouse-Hinds Company of Canada, Ltd., Toronto, Ont.

CONDULETS are made only by CROUSE-HINDS

CONDULETS • TRAFFIC SIGNALS • AIRPORT LIGHTING • FLOODLIGHTS

Serving the nation

from 3 great factories

through a nationwide distribution network

Hubbard products are carried in stock by more than 200 leading electrical jobbers throughout the United States. There's one near you.

Hubbard and Company began the manufacture of Pole Line Hardware when the Electrical Industry was in its infancy, and its growth has paralleled that of the power and communication systems.

Today three great plants, strategically located in Pittsburgh, Chicago, and Oakland, California, manufacture over 4000 items which are distributed to customers in 48 states and many foreign countries.

With confidence in the future of the industries which it serves and in the future of our nation, Hubbard continues its program of constantly expanded facilities and services.

HUBBARD AND COMPANY

PITTSBURGH • CHICAGO • OAKLAND, CALIFORNIA

"Hang the Load on Hubbard Hardware!"

In spite of continuing material shortages
Steel City is maintaining production of . . .

***All* Outlet Boxes and Covers**
***All* Switch Boxes**
***All* Conduit Fittings**

In fact . . .

***All* Products that are a part of its complete line**

As always
Steel City Leads in Meeting Contractors' Needs

THESE SOUTHERN REPRESENTATIVES ARE AT YOUR SERVICE

ATLANTA
Edgar E. Dawes & Co.
401-402 Rhodes Bldg.
Phone: Main 7219

DALLAS
Geo. E. Anderson Co.
1903 Griffin Street
Phone: Riverside 5931

WASHINGTON
Quick & Batchler, Inc.
433 Munsey Building
Phone: Sterling 4488

REPRESENTATIVE OF STEEL CITY'S COMPLETE LINE
of
ELECTRICAL BOXES AND FITTINGS

STEEL CITY ELECTRIC CO.
1207 COLUMBUS AVENUE
PITTSBURGH 33, PA.

NOW . . . stock and use BullDog Vacu-Break Master Switch for all Type A, C, and D applications . . . *at Type C prices!*

NOW! Fill any need for Type A, C, or D switches from one magnificent line of BullDog Vacu-Break Master Switches. End chaos of hundreds of confusing switch catalog numbers . . . work with just 38! Order, stock, install one line. Save time, money, effort.

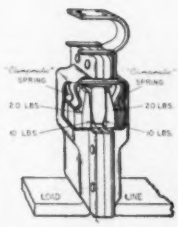
NOW! A great, tested BullDog switch that fills all Type A specifications, yet sells at C prices, to end today's switch turmoil and streamline your use of Type A, C, and D switches! Another great BullDog first!

All the famous BullDog features!

- Vacu-Break principle of circuit rupturing
- Self-aligning Clampmatic Contacts
- Quick-make and quick-break
- Anti-creepage corrugations on switch bases and arc chambers
- Solderless cable terminals (wire grips)
- Horsepower-rated
- Silver-surfaced current-carrying parts
- Voidable cover interlock
- Spring-reinforced fuse grips
- Ample supply of concentric K.O.'s
- Generous wiring space in all switches

EXCLUSIVE CLAMPMATIC CONTACTS! →

"Clampmatic" is a method for obtaining extra and enduring contact pressure between switch jaws and blades. Clampmatic provides a total of 30 lbs. of contact pressure between both sides of blade and jaw for "bolt-tight" contact.



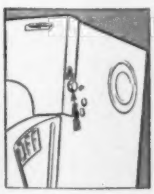
← **EXCLUSIVE VACU-BREAK PRINCIPLE!**

Dangerous arcs are quickly snuffed out by lack of oxygen in BullDog's exclusive Vacu-Break arcing chamber. This eliminates excessive arcing which, in ordinary switches, causes burning, pitting and rapid deterioration of contacts.

VOIDABLE COVER INTERLOCK! →

Interlock: With interlock pin at Hole A, cover cannot be opened unless switch is OFF. Cover must be fully closed to throw switch ON.

To void interlock: Simply push interlock up and insert interlock pin in Hole B. Switch can then be thrown ON or OFF with cover open or closed.



WRITE DEPT. 453-B FOR DESCRIPTIVE FOLDER

BULLDOG ELECTRIC PRODUCTS COMPANY

DETROIT 32, MICHIGAN • FIELD OFFICES IN ALL PRINCIPAL CITIES

IN CANADA: BULLDOG ELECTRIC PRODUCTS OF CANADA, LTD., TORONTO

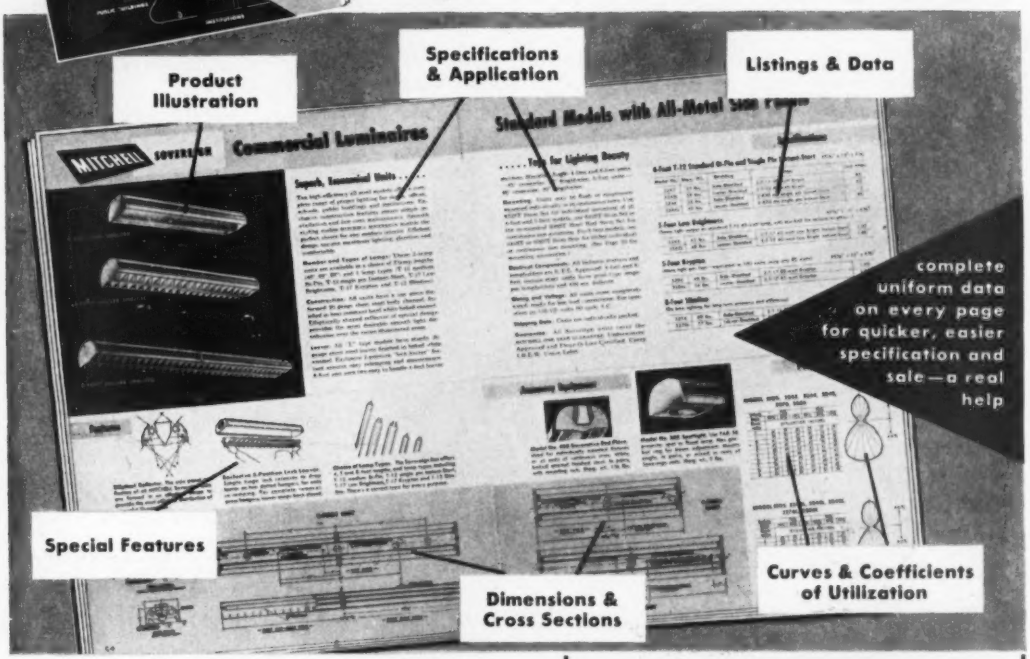
BULLDOG

THE LEADER IN FLEXIBLE ELECTRICAL DISTRIBUTION

MITCHELL gives you 2 complete easy-to-use catalogs for quick, proper specification covering every lighting need

1 "DYNALITE" LIGHTING FOR INDUSTRY

2 COMMERCIAL FLUORESCENT LIGHTING


Product Illustration
Specifications & Application
Listings & Data
Commercial Luminaires
Standard Models with All-Metal Trim
complete uniform data on every page for quicker, easier specification and sale—a real help
Special Features
Dimensions & Cross Sections
Curves & Coefficients of Utilization

For fast, simple specification of preferred quality lighting, use the new *complete* MITCHELL Catalogs. Here are full details on 74 superb Commercial Luminaires and 82 *Dynalite* Job-Rated Industrial units, presented in clear, quick-reference form. Select instantly the *exact* units you need to fill the bill for every lighting requirement. Rely on MITCHELL for the finest lighting equipment at sensible prices. Send for these new catalogs *now*.

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☐ Mitchell Commercial Lighting Catalog
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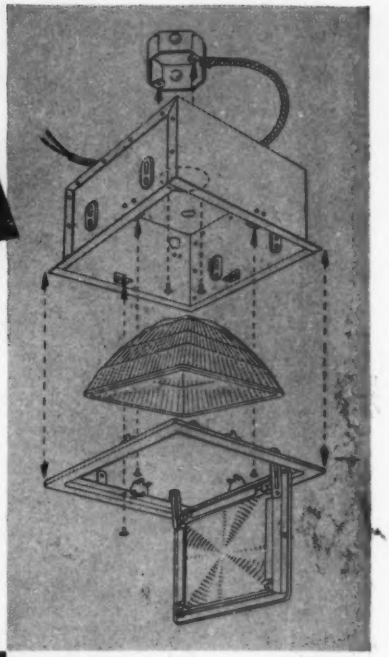
The LIGHT-TIGHT DUO-FRAME

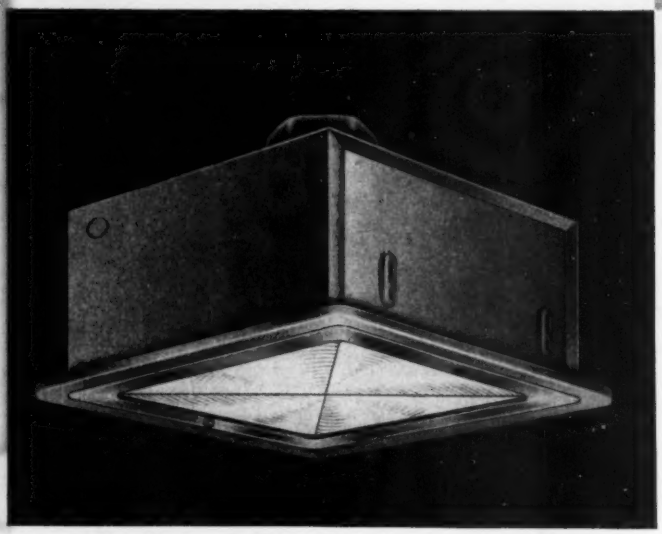
DAY-BRITE'S newest recessed lighting units

PREVENT DAMAGED CEILINGS...

MAKE LIGHT LEAKS IMPOSSIBLE...



Just mount these handsome, new Day-Brite fixtures and stop worrying about ceiling damage, paint scrapes, or unsightly finger marks . . . caused during installation, cleaning or relamping. Day-Brite's Duo-Frame brings you these advantages because the Duo-Frame is simply . . . two frames! The outer frame is fastened to the box after painting and plastering have been completed, and it remains in position during servicing. The inner frame, mounted to drop hinges, is easily removed for servicing. And this exclusive Day-Brite light-tight engineering eliminates all light leakage.



30 GREAT FEATURES INCLUDE:

Holophane Controlens* for maximum efficiency, even illumination and low brightness.

Die-formed, riveted and welded construction throughout.

Two sizes: Available for 8½" and 12" square Holophane Controlens,* vertical or horizontal lamp mounting.

Frame finished in Hot-Bonded Lustre Aluminum Enamel, rust-inhibited before painting.

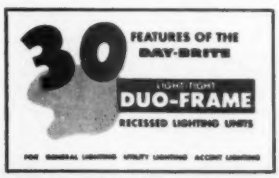
For complete information on the new Duo-Frame write Day-Brite Lighting, Inc., 5435 Bulwer Ave., St. Louis, Mo.

*®The Holophane Co.

NOW, MORE THAN EVER

AMERICA MUST SEE WHAT IT'S DOING

IT'S EASY TO SEE WHEN IT'S "DECIDEDLY BETTER" **DAY-BRITE** *Lighting Fixtures*



162

For a quick look at all 30 big features ask for this free booklet.

QUIET
ADVANCE
FLUORESCENT LAMP BALLAST
FOR
TWO 40 WATT LAMPS
CAT. NO. BRSH-240
115 V. 60 CYC. .85 AMP.
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SPEC. NO. 6
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LAMP
LAMP
BLACK
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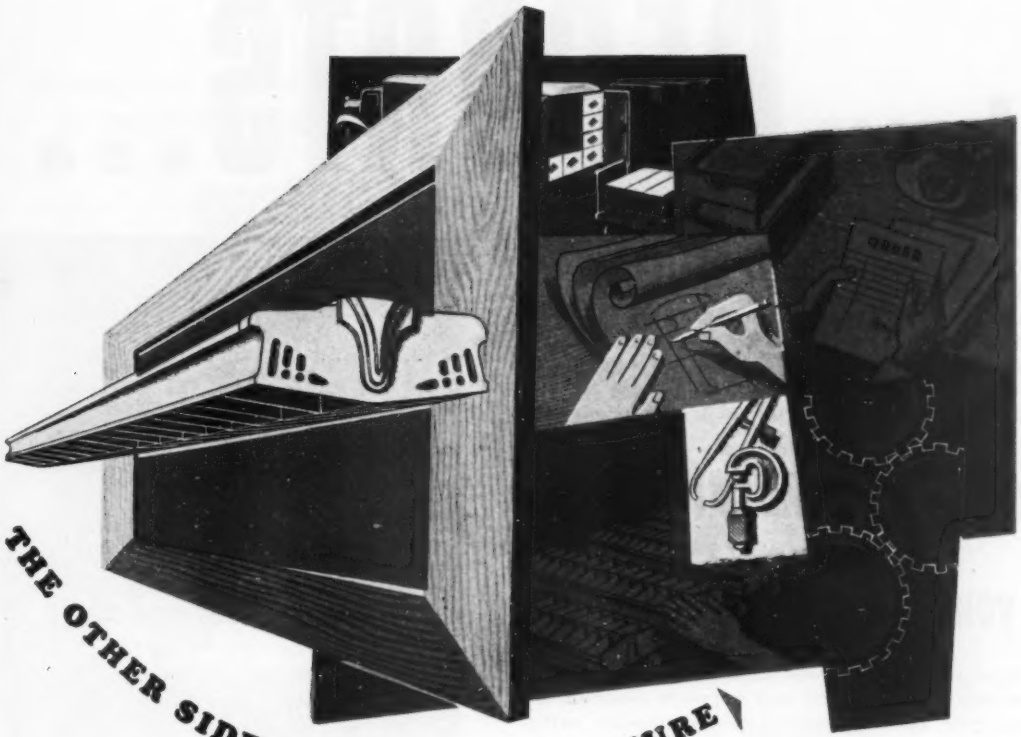
CHAMPION MEANS THE BEST IN LAMPS

CHAMPION MEANS BUSINESS FOR YOU

CHAMPION — the Sign of Quality since 1900 — attracts customers . . . holds them . . . builds up a profitable repeat business that's sure, steady, dependable. *Champion means business!* Ask your Distributor — or write directly to the

CHAMPION LAMP WORKS, Lynn, Massachusetts.

A DIVISION OF CONSOLIDATED ELECTRIC LAMP COMPANY



THE OTHER SIDE OF THE GUTH PICTURE

we are big—
—and we are small

we are big enough to massproduce
any huge installation project—
—and small enough to tailormake that one fixture in
the corner store or the board chairman's glamour office

we are big enough for assembly-line work—
—and small enough to work with you on
any special lighting problem

we are big enough to produce a complete line
of commercial and industrial fixtures—
—and small enough to keep our executives' doors open for
you any time you need help

we are big enough—
—and small enough
to be your friends

Ed P. Guth

Guth **LIGHTING**

THE EDWIN F. GUTH COMPANY / ST. LOUIS 3, MISSOURI

Leaders in Lighting since 1902

A user REPORTS...

After their satisfactory experience with the 500,000 C. M. insulated aluminum cable (at right), National Supply Co., Torrance, Cal., says, "We will seriously consider aluminum when similar installations are planned." These cables, insulated with RH 600 v. U. S. Paracore, are connected to bus, from which they carry current to distribution panels for such heavy loads as welding machines, shears, rolls and other equipment.

figure it in ALUMINUM and you figure it low

When you plan new production lines, add feeders for heavier loads, get prices both ways—in aluminum and in copper. You'll find you can make worth-while savings with aluminum . . . and installation is faster, easier because of aluminum's light weight.

Although the rearmament program restricts the use of aluminum, we are ready to help you with the planning for trouble-free, low-cost wiring.

FREE INSTALLATION BOOK

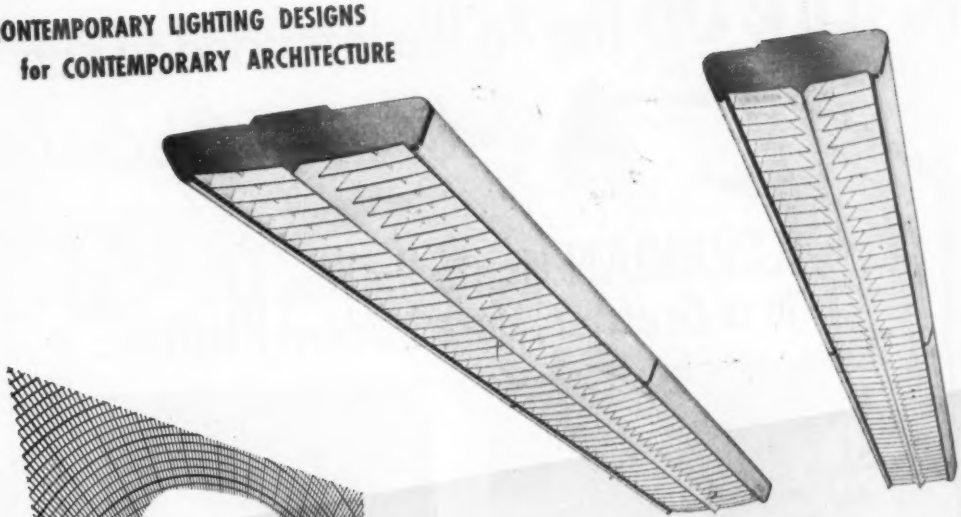
"Questions and Answers" on installation of aluminum conductors. Write for it now — ALUMINUM COMPANY OF AMERICA, 1778K Gulf Bldg., Pittsburgh 19, Penna.

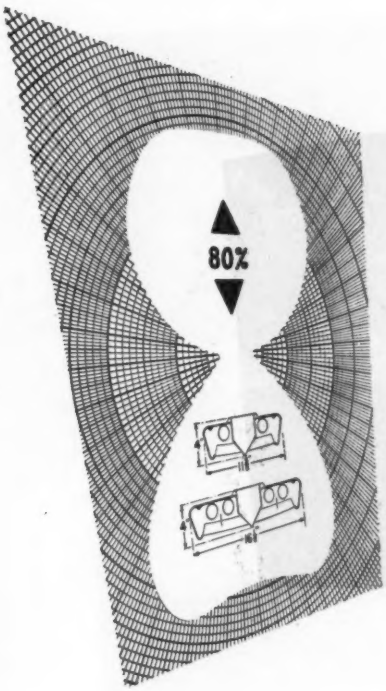
Aluminum Conductors

ALCOA

of ALCOA ALUMINUM are made by leading manufacturers

CONTEMPORARY LIGHTING DESIGNS for CONTEMPORARY ARCHITECTURE





A new Sunbeam series (#L-1280) combining simplicity of line and structure with an accent on easy maintenance. • Only four inches deep, these new units have been designed to meet the needs of contemporary architecture, for a high output, non-recessed light source that is visually unobtrusive yet has high distribution efficiency. • A one-piece, easily displaceable louver shielding element which exposes lamps (and wiring if desired) for immediate inspection, is the key to the reduction of high maintenance costs, generally found in today's large area lighting installations. • Available for immediate delivery, this new series will be specified for stores and offices everywhere. Watch for it. For complete details write...

SUNBEAM LIGHTING COMPANY
777 EAST 14TH PLACE, LOS ANGELES 21, CALIFORNIA

We Tore Up The Ad We Intended to Run

And Wrote Another One!

KERRIGAN Lights the Way To a Greater, More Modern Miami!

Early in October, 1950, pictures were made of a brand new street lighting installation in Miami. The standards had been installed on Miami Beach's beautiful Collins Avenue and were ready to be turned on. It was a job we were proud of; and the advertisement shown above was prepared and made ready to send to the magazines.

THEN MIAMI'S WORST HURRICANE

SINCE 1926 STRUCK!

Telephone and electric poles toppled; radio towers fell; huge transformers lay smashed in the street; and there was wreckage everywhere. BUT THE KERRIGAN WELDFORGED STANDARDS STOOD. Tall, tapered, beautiful, and PERPENDICULAR—still ready to light the way when the current could be turned on!

The City Engineers were jubilant and wired their congratulations to KERRIGAN. We were jubilant too, but NOT surprised; for Kerrigan Weldforged Lighting Standards meet the highest engineering standards for highway and street lighting. Write today for your free copy of Catalog AIA. It gives detailed specifications.

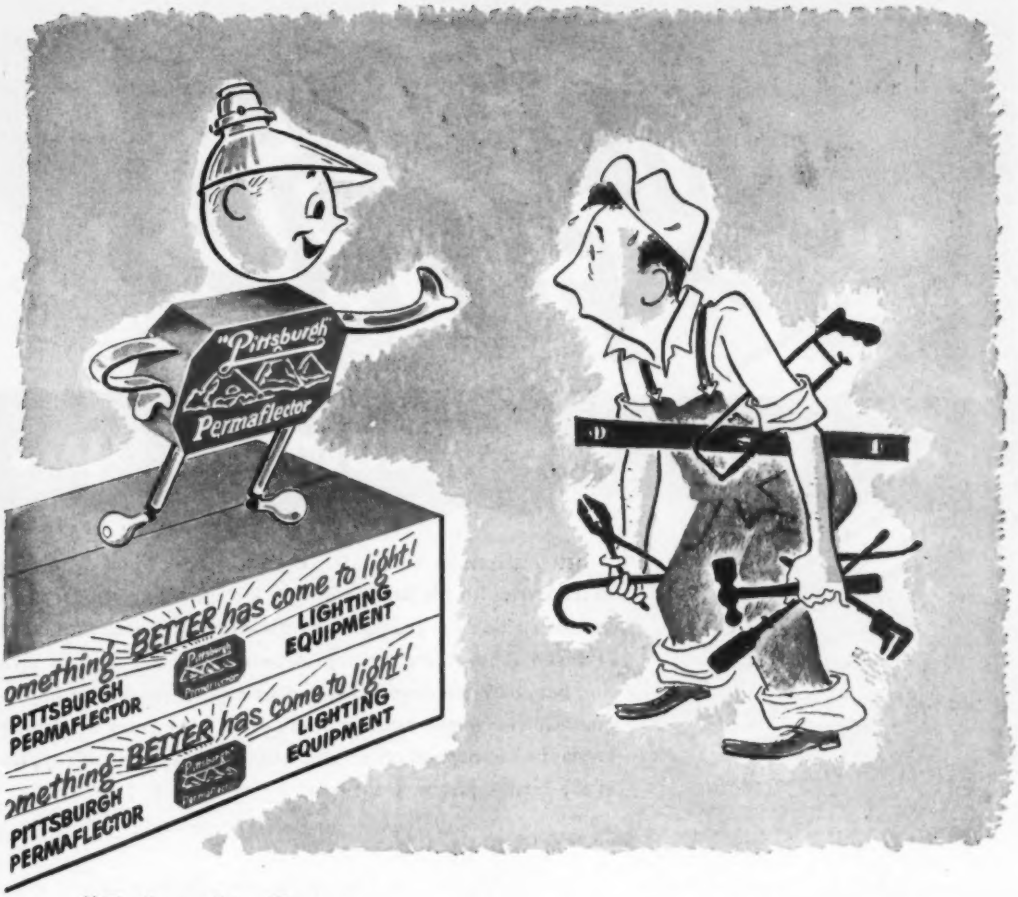
Photo of Collins Avenue immediately after the hurricane. In the midst of the wreckage, Kerrigan Standards stand like beacons.

Free

STREET LIGHTING CATALOG

Just send your request (on your letterhead please) to

KERRIGAN IRON WORKS, Inc.
General Sales Office
274 MADISON AVENUE, NEW YORK CITY



"Take it Easy... the Job's Half Done!"

The job's half done when you install Pittsburgh Permaflector Lighting Equipment. All Fluorescent Units come compactly wired and ready-to-install. They go up quickly and easily. They save many man hours of installation time.

In end-to-end mounting, Pittsburgh Permaflector Fluorescent Units lock together and align perfectly. Squares and other patterns are a "natural" to install.

Next time—take it easy. Use time-saving, labor-saving Pittsburgh Permaflector Lighting Equipment.

PERMAFLECTOR PETE SAYS:

"Pittsburgh Lighting + Saved Manhours = MORE" PROFIT

Write today for full profit advantages of working with flexible Pittsburgh Permaflector Lighting Equipment.

"Pittsburgh" Permaflector

Pittsburgh Reflector Company

405 OLIVER BUILDING · PITTSBURGH 22, PENNSYLVANIA

Permaflector Lighting Engineers in All Principal Cities

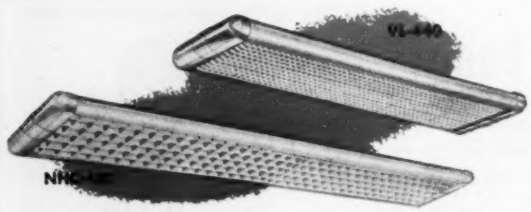
DISTRIBUTED BY ELECTRICAL WHOLESALERS EVERYWHERE • PERMAFLECTOR LIGHTING ENGINEERS IN ALL PRINCIPAL CITIES

The "FLUORESCENT FIFTIES" are coming up...

Better electrical wholesalers everywhere will look to Leader in the Fifties for the latest in design, the finest in quality, the best in construction . . . regardless of the type of fluorescent fixtures involved. They know they can depend on Leader for new styling, better engineering and low price . . . the three most important elements in any lighting installation. Also, *every* wholesaler knows he can depend on a continuation of Leader's full support in the Fifties, just as in the past.

Sell Leader and sell the finest!

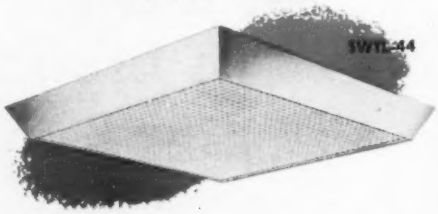
OFFICER SERIES



The fixture that brings glamour to commercial interiors! Streamlined and beautifully proportioned, with curved translucent plastic side panels, moulded one-piece plastic louver in choice of 45° or 31° shielding angle. Has steel channel and deep drawn end caps. Available for two, three or four 40-watt tubes. Slimline Officer series for two, three or four tubes in lengths from 48" to 96".

Adjustable incandescent spotlight available for use in line with Officer fixtures for effective and flexible highlighting of special areas. Use as insert between fixtures, at end of continuous runs, or at intersection of rows.

SQUARE SERIES

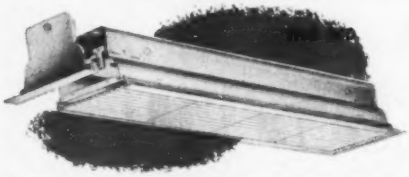


Leader's newest! These striking Square units furnish intensive light for selected areas, at the same time providing floods of non-glare light for overall illumination. The most popular size is 4' x 4', with choice of four, six, eight or ten lamps, either conventional 40-watt or T-12 single pin Slimline. Also available in 2' x 2', 3' x 3' and 6' x 6'. Larger size of fixture means fewer units to buy, to install, to service. Abundant light output eliminates necessity for special fixtures for highlighting. Square units may be recessed, semi-recessed, surface or suspension mounted.

Sold and installed by the better electrical dealers and contractors

Leader America's No. 1 Lighting Equipment Manufacturer

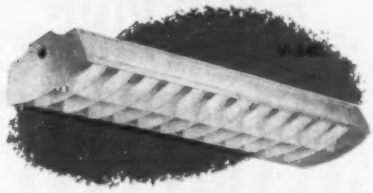
TROFFERLITES



Leader alone, of all manufacturers, offers a complete line of recessed trouffer fixtures for versatile, efficient lighting. Leader Trofferlites, shown here with Holophane Controlens*, are available also with Factrolite, flat Albalite, curved Corning lens, and other special types of lenses. Open, louvered and baffled styles, too. Choice of flange trim or T-bar mounting construction, regular or shallow depth. For one, two or three 40-watt tubes, and for two or three Slimline tubes in choice of 72" or 96" length. Trofferlites in the 40-watt series are also available in all styles above in 24" width for special lighting applications.

*Copr. The Holophane Co.

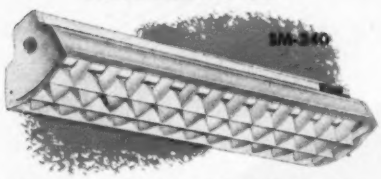
VARSITY



Offers you most for your money! Varsity fixtures furnish large light output at economical installation and maintenance costs. Not a "bargain" fixture—but quality engineered throughout to meet the demands of modest budgets, 60% downward, 40% upward illumination. V-shaped reflector for high light values, baffle-type louver for correct shielding. Channel and housing of steel, finished in white, high gloss baked enamel. For two, three or four 40-watt tubes. Slimline Varsity series for two, three or four tubes in lengths from 48" to 96".

look to LEADER for the finest!

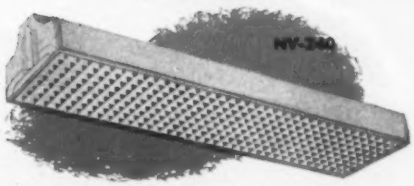
SCHOOLMASTER



Designed to provide 60% direct and 40% indirect illumination, Leader's Schoolmaster is ideal for lighting classrooms, libraries, other areas where light for close seeing is a constant requirement. Standard louver cut-offs of 25°-35° and 25°-45°. Available with or without built-in 15-watt or 30-watt germicidal lamp. (Natural room circulation causes air to pass through irradiated zone.)

Steel housing and channel, finished in white, high gloss baked enamel. Translucent plastic side panels available on request. For two, three or four tubes, either conventional 40-watt, or Slimline in lengths from 48" to 96".

NEW VARSITY

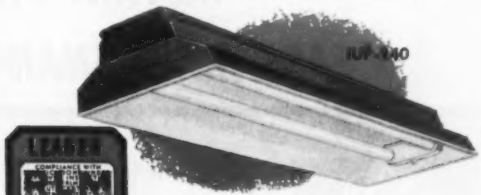


A luxury fixture at a budget price. Ribbed translucent plastic side panels add new beauty. Will not warp or discolor. Moulded plastic louver, with 40° x 40° shielding angle, "sifts" light for pleasing, efficient distribution. Upward light spill gives 40% indirect, 60% direct illumination. Steel parts finished in white, high gloss baked enamel, with satin-finish aluminum gray trim. For two, three or four tubes, either conventional 40-watt, or Slimline in lengths from 48" to 96".

LEADERALL Louvered Light Ceiling

Leaderall louvered grilles of featherweight plastic make it possible to have completely illuminated ceilings with a pleasing glow of even light from wall to wall. New ceilings can be finished to complement modern decorative schemes, and old ceilings modernized without making any structural changes. Leaderall plastic units, with 40° x 40° shielding angle, are held by adjustable tie rods to form a completely level, rigid ceiling at any desired height. Will not warp. Easily removable for quick re-lamping. Can be used with any type of fluorescent fixture. No interference with sprinkler system or air conditioning. Leaderall units are available in 2' x 4' and 4' x 4' sections. Other sizes, to fit curvatures or odd corners, available on special order.

STRATOLINER Industrial Series



The Stratoliner offers everything desired in a heavy duty, all-steel industrial fluorescent fixture. Durable, strongly built, neat in appearance, easily serviced. Model IUP-240, shown here, is for two 40-watt lamps, with closed end porcelain enamel reflector, RLM approved. Housing and exterior finished in gray baked enamel. Other 40-watt fixtures for two or three tubes, in choice of open or closed end reflectors. Powerful 85-watt Stratoliner series available for locations requiring higher mountings and wider spacing of units. Choice of open or closed end reflectors.

Leader

LEADER ELECTRIC COMPANY

3200 NORTH KEDZIE AVENUE, CHICAGO 18, ILLINOIS

SILV-A-KING
SLIMLINE

HEAVY DUTY
INDUSTRIAL UNITS

- ***MORE LIGHT!***
- ***INSTANT START!***
- ***EASY MAINTENANCE!***

SILV-A-KING RLM

SILV-A-KING LIGHTING EQUIPMENT

BRIGHT LIGHT REFLECTOR COMPANY
Bridgeport 5, Connecticut

Represented in the South by:

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9 East Cary Street
Richmond, Virginia

HARRY A. MILLER CO.
1925 Cedar Springs
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L. MORRIS LANDERS CO.
624 Spring Street, N.W.
Atlanta 3, Georgia

L. W. ROBERTS CO.
927 Guilford Bank Bldg.
Greensboro, North Carolina

MORE AMPERES CAN RIDE THESE CABLES

You can do yourself and our country a service by installing Simplex-ANHYDREX XX Cables wherever you need to replace high voltage power cable.

Here's why. You can crowd more amps into the same size copper when it is insulated with Simplex-ANHYDREX XX. That's how you save copper. Of course your cables will run hotter but that's all right with Simplex-ANHYDREX XX insulation. This insulation is built to withstand 75°C. to 80°C. (167°F. to 176°F.), depending on operating conditions.

Simplex-ANHYDREX XX Insulated Cables can be used underground, directly in the earth, or in ducts, or they can be used overhead as aerial cables. The special Simplex neoprene jacket protects these insulated conductors from sunlight, oil, acids, alkalies, etc.

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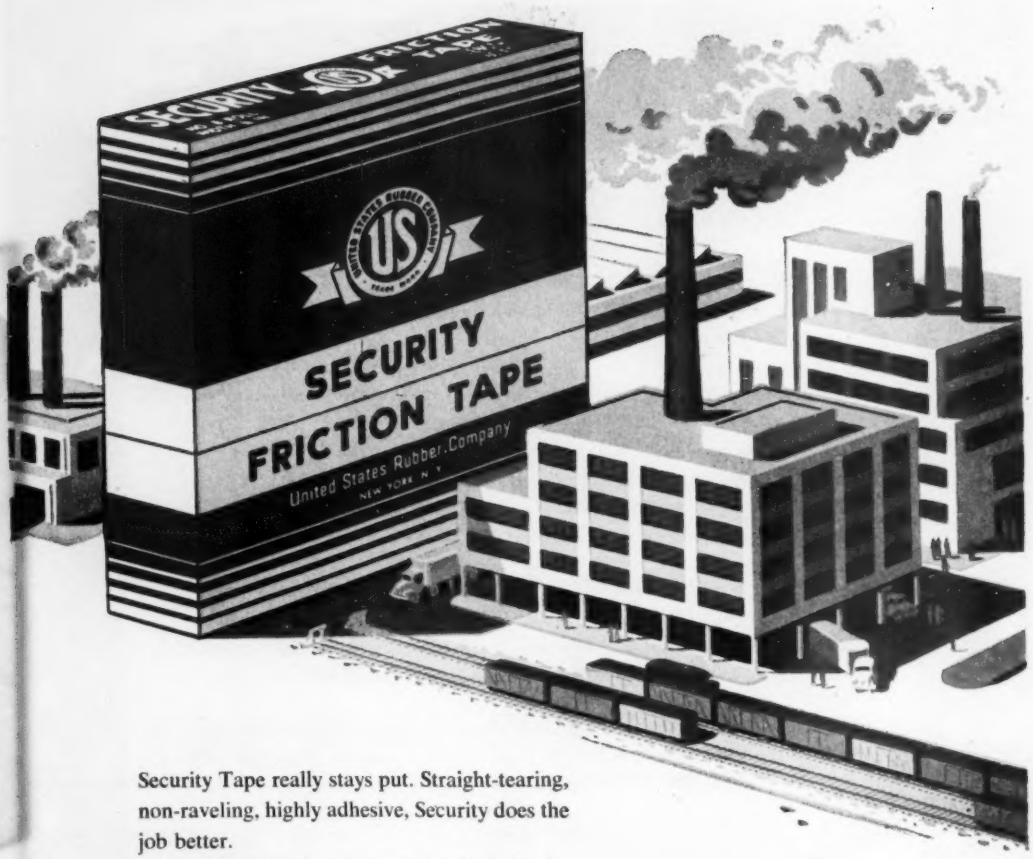

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Where is lighting headed?

Southern and southwestern vice-presidents of IES explain what the society expects to accomplish.

by R. C. Paslay

Vice-President
Southern Region
Illuminating Engineering Society

◆ PROGRESS IN lighting has been so rapid in recent years that even we who are so closely associated with its use have difficulty keeping up with the latest developments.

This great interest in the oldest of electric services is the result of the combined efforts of scientists, designers, manufacturers, advertising men, utilities, salesmen, and that important group who pay the bills—the users.

Lighting in the South

Happily, this growing appreciation of lighting is evident here in the South. The southward movement of industry has broadened the need for ample, well-planned lighting for greater production.

Increased retail sales have sharpened the merchants' interest in modern, well-lighted stores. More modern agricultural methods have resulted in better-lighted farm homes and farm buildings.

The definite trend to new and modern home design has pointed up the importance of good lighting to the comfort and beauty and safety of those homes.

Greater understanding of the importance to school children of evenly distributed, low-brightness lighting of reasonable intensity is resulting in great strides toward properly lighted schools.

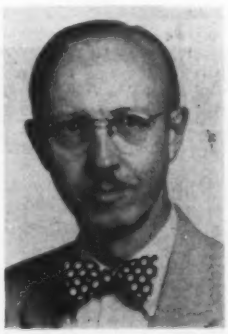
Lighting, therefore, is a contributing factor to the south's improving production, commercial operations, agricultural operations, school facilities, and living conditions.

This is strong proof that good lighting is a good investment. Were the cost of securing it not a good investment, the developments resulting from the tireless work of the scientists during the last half century would not now be so widely and generally enjoyed. The group who pay the bills—the users—would not be buying it.

The Illuminating Engineering Society, during its 45 years of existence, has been a non-profit organization having as its object the advancement of the theory and practice of illuminating engineering and the dissemination of knowledge relating thereto. Its more than 7,500 members are working in the various related fields of lighting to advance and disseminate knowledge of this science.

Just as the use of lighting has increased, so has interest in the work of the society grown. Membership has increased rapidly, and so has the society's activities.

With the close co-operation of all interested groups, the appreciation and use of good, well-planned lighting will continue to grow.



by W. E. Folsom

Vice-President
Southwestern Region
Illuminating Engineering Society

◆ AS THE TEMPO of the defense effort is stepped up, there is an increasing need for greater efficiency in every field of human endeavor.

(Continued on page 94)

Lighting for production

The purpose, easier seeing, is the same for each problem, but special techniques are required to get the objective most efficiently.

by J. L. Tugman
Lamp Division
General Electric Co.

◆ THE GROUP OF eight lighting installations selected for this article shows advanced practice for many types of manufacturing industry in the South.

As a group they represent the advantages that can be gained from a phase of plant housekeeping that is often neglected. Managements do not often get around to investigating the consequences of poor lighting, although it is one of the most critical factors affecting their operations.

FOUNDRY CORE ROOM — Each industrial reflector contains a 300-w filament lamp. The units are mounted 15 feet above the floor on 8- by 10-ft spacing. The illumination averages 30 ft-c and the power required is 3¾ watts per sq ft.

Managements are well aware of the difficulties that follow when they are short on supplies of critical materials. They can't operate without them any more than they can without workers.

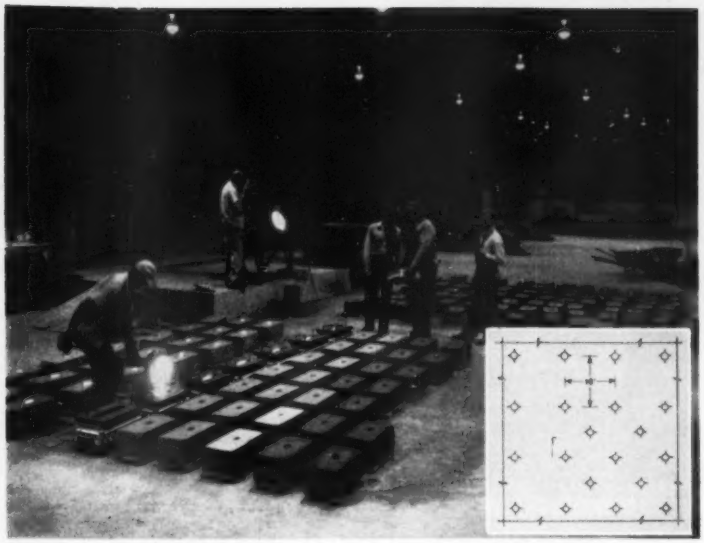
Mention of the labor supply emphasizes its present scarcity. Right now, and increasingly more so, green help, or older workers, will provide replacement for men who are called to service or who have migrated to other labor markets.

From lack of experience, or slower reflexes, the replacement worker may pull down labor efficiency. He represents potential increases in unit costs and in accident liability. Management's problem is to work out adaptations of job techniques suitable to available worker skills.

Supplement to personnel

At the same time, by increasing the efficiency factors in plant facilities, the green or older worker can be more rapidly made effective. This includes improving the lighting, and with care it can be the most powerful supplement to plant personnel.

Seeing the work as clearly and as comfortably as possible is a



FOUNDRY MOLD ROOM — This installation consists of 500-w R-52 reflector lamps in porcelain sockets. Illumination in major working area is about 40 ft-c. Lamps are installed on 16- by 16-ft centers with extra lamps at the center of each square over the important working area. Mounting height is 16 feet, but more comfort is achieved by higher mounting.

"must" where green help or older workers provide the labor replacements. Labor costs are high for any kind of labor available today.

The ease with which jobs can be found is also a factor to consider. It makes workers shop around for the plant with the best working conditions.

Good lighting is the condition that offers immediately noticeable evidence about the attractiveness of a given plant.

A lot of light

Good lighting isn't just a "lot of light." In many plants it would be substantially more than had been used previously. That fact alone would not make it good.

While it is true that seeing is generally easier with more light, comfortable seeing for a full day in a plant requires planning.

In the first place the kind of plant must be considered. That takes into account the physical layout of plant areas, the kind of plant equipment used, and the tasks in each department.

Operations conducted in an industry that is inherently affected with wastes and smoke in the air, in foundries for example, have a problem: to get lighting equipment that can function well in spite of the dirt.

Foundry lighting

Two examples of foundry lighting are shown in this group of installations. One shows a system widely used with 300-watt filament lamps in industrial reflectors. These are spaced 8′ x 10′ on centers and a level of 30 foot-candles is provided.

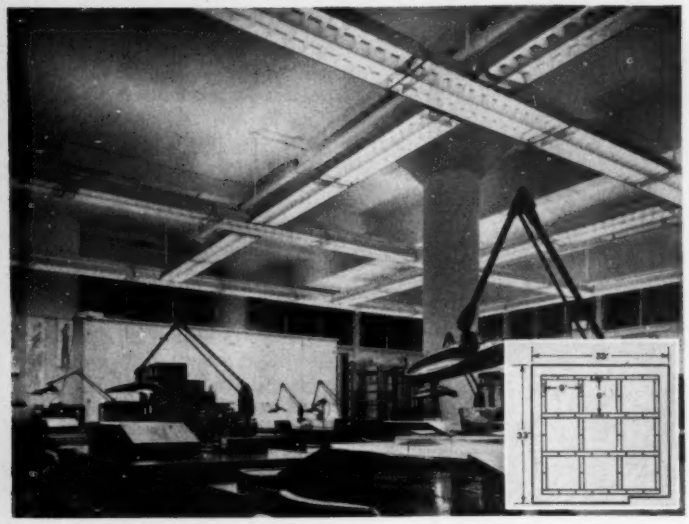
This is a better-than-average installation. Such an installation is very susceptible to depreciation in foundries and, unless maintained systematically, would deliver only a fraction of the designed illumination.

By contrast the 40-foot-candle foundry installation, with the 500-watt R52 equipment on 16′ x 16′ spacing, delivers a seeing level that seldom falls below the planned amount, and then only for an outage.

The R-type lamps with the self-contained reflector, bright and clean during the life of the lamp, have very low depreciation. Relatively little dirt collects on the emitting surface of these lamps.

Foundries are special cases in the practice of lighting specialists. When labor is scarce and the price is high, economy argues for

METAL FABRICATING PLANT — This installation of 750-w R-52 lamps delivers 35 ft-c, average in service, to the work areas of this high-bay portion of the plant. The lamps are located on 15- by 16-ft spacings and are mounted 30 feet above the floor.



SEED INSPECTION — Mounting height is 8½ feet. General lighting is provided by two-lamp 40-w fluorescent units mounted in a grid pattern. Average in-service illumination is 85 ft-c, and the units require 4½ watts per sq ft. Supplementary units give over 200 ft-c on inspection areas and contain a magnifying glass and three 6-w fluorescent lamps.

R-type lamps. With practically no maintenance problem, this style of installation is generally the best answer.

In most other types of industry, where plant housekeeping can reduce dirt accumulations on walls and machines, maintenance considerations apply to all large surfaces in the field of view. This comprehensive maintenance is waived in foundries and other inescapably dirty plants, because it is prohibitively expensive.

Thus, in the example of the metal fabricating plant, the use of 750-watt R52 lamps was decided on as the best way of coping with inherent conditions. The system delivers 35 foot-candles and the character of the lamp construction guarantees the level on a maintained basis.

More light and more comfortable conditions can be enjoyed in any plant if all large surfaces in the field of view from any work position are painted light in color and kept clean. These maintenance rules are necessities of plant housekeeping where the work involves sustained seeing tasks of more than average difficulty.

If we study the two grid systems—the one for seed inspection, the other a machine shop—we have examples of industrial operations in which top seeing conditions are imperative.

Practical levels in these plants are twice that for foundries. To supply such levels uniformly and without glare, direct or indirect, care must be exercised to balance brightness.

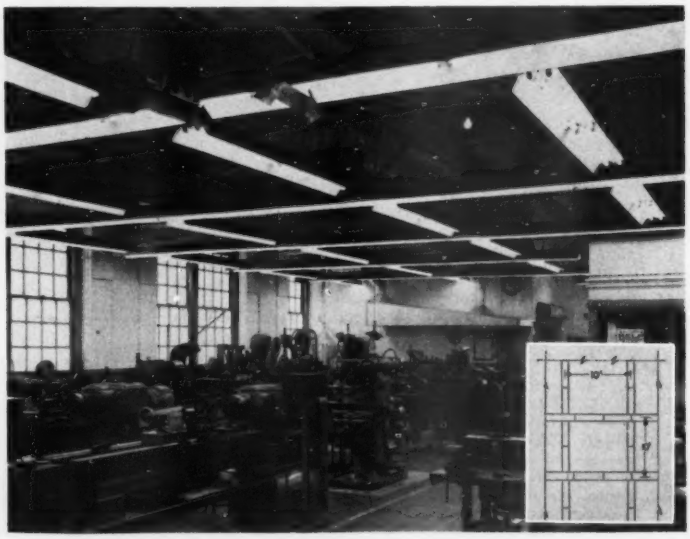
By keeping room surfaces clean and light in color, the higher amount of light on the task is not sharply contrasted with surfaces that the skilled worker sees around him. His eyes are not forced to adjust to objectionable differences in brightness because balance has been effected.

When we say that good lighting is something more than just "a lot of light," we mean that the objective of comfortable seeing is best related to the task.

Intermediate situations

Between the narrow alternatives for foundries (where safety is related to ease of maintenance of lighting) and the objectives for specialized tasks which call for sustained, accurate seeing (as well as safety), there are many intermediate situations.

The weaving room installation of two-lamp white troffers is a proved case of lighting's contribution to the textile industry. This type of installation is widely used



MACHINE SHOP — Throughout the 3,000 square feet of floor space the fluorescent grid system delivers an average illumination of 75 ft-c. The rows of two-lamp 40-w units are spaced 10 feet apart and are mounted 10 feet above the floor.

TEXTILE INDUSTRY — Single-lamp 40-w, white troffers in this air-conditioned plant provide more than 60 ft-c in service. Troffer rows are on 5-ft 4-in. centers.

today in offices to insure attractive working conditions.

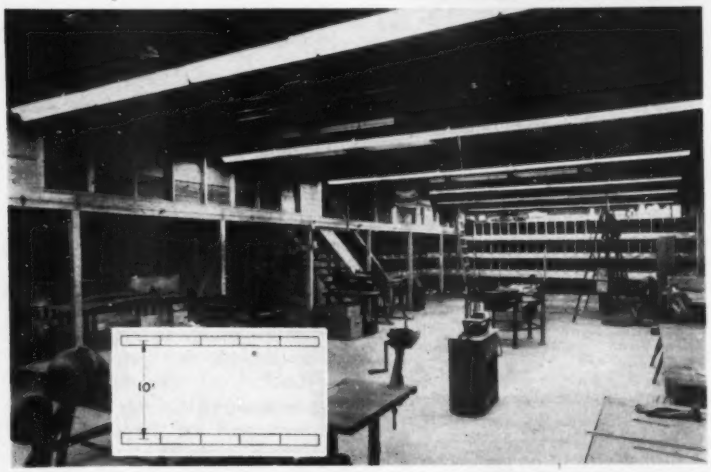
Ten years ago, however, when this installation was a pioneer example in the textile industry, it demonstrated a number of facts which have become more prominent with the passing years.

Tasks in weaving rooms are usually difficult seeing tasks. The amount of work an individual worker can do depends largely on how quickly and accurately he can see during an entire work day.

Troffer lighting with its shielding angle protecting the eyes from direct glare and, in this case, oriented with reference to the machines to get the most light on the work, is another example of how brightness balance aids efficiency.

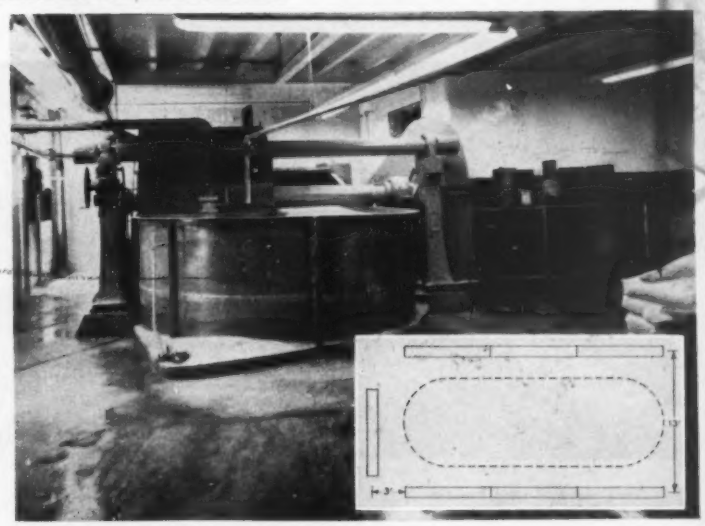
Today there are many troffer installations serving industries where the work involves difficult seeing tasks. While the initial cost may be somewhat higher (if the ceiling price is added in), the benefits especially in connection with controlled conditions (this plant is air-conditioned) are eco-

(Continued on page 92)



SHEET METAL SHOP — The open-end industrial units each contain two 40-w fluorescent lamps. They are mounted 11 feet 6 inches above the floor. Average illumination is 35 ft-c and the lighting requires 2 watts per sq ft.

PAPER PULP BEATER — Light reaches all areas inside the beater from the strategically located two-lamp 96-in. T-12 slimline fluorescent units. Note end unit placed at right angles to others. Mounting height is 9 feet above the floor. Illumination is 35 ft-c over beater and higher in aisles.



The need for protective lighting exists now in many southern industries and utilities

Lighting for protection

by B. F. Benning
Manager, Lighting Sales
Graybar Electric Co.
Dallas, Texas

♦ THE ASTONISHING industrial mobilization and expansion program of this country during World War II was an important factor in the development of industrial and protective lighting standards and practices as we know them today. Planned lighting was one of the critical factors in reducing production time and production costs.

During the war, the need for protective lighting as a deterrent to sabotage was fundamental in all plants which were producing vital materials; its widespread use unquestionably prevented loss or destruction of critical material and the production time required to replace it.

The advent of the Korean War has made it necessary that our country return to a condition of semi-mobilization, and we are once again faced with the important lighting problems incident to maximum productive output and protection of our vital facilities.

It is imperative that our profession must now be prepared to contribute its wealth of knowledge and experience to this defense effort which may very well be an exigency endangering our way of life if not our very lives.

In the matter of protective lighting, it is not our intention to arouse panic or fear but, first of all, to present some facts which most of us know but may have overlooked or chosen to ignore:

This railroad yard has floodlights installed for operational functions as well as protection.

Facts often overlooked

(1) America is the greatest power in the world primarily because of her phenomenally tremendous production ability. Our government has told us repeatedly that there are considerable numbers of our potential enemies in this country whose function it will be to cripple all phases of American industry whenever they are ordered to do so.

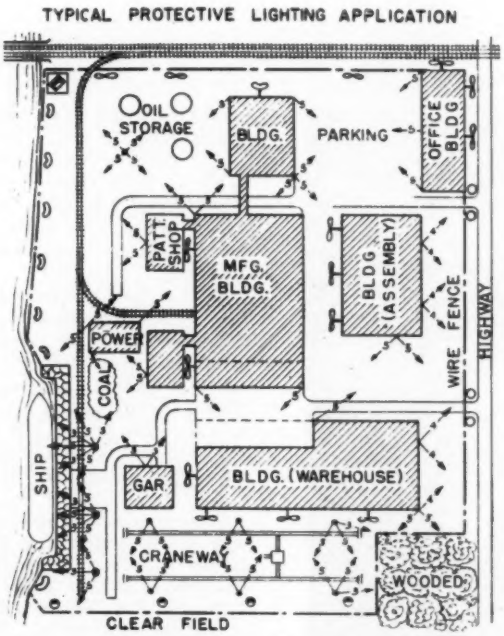
It is obvious that this is to be attempted by sabotage of the industrial plants and related facilities of the nation and that every precaution must be taken to prevent this activity.

(2) The most effective aid to persons intending malicious property damage is darkness.

(3) The most reliable and economical form of protection against nocturnal intruders is light—light bathing all approaches to structures in glaring brilliance, eliminating darkness and shadows in storage yards, compelling everyone within area boundaries to be as visible at night as in daylight.

With these facts in mind, there should be no question that the need for protective lighting exists *now* in almost every section of the country. Vital facilities include public utilities, water purification and pumping stations, dams, lakes, harbors, bridges, railway yards, and many other similar locations, as well as the all - important manufacturing plants.

The illumination of entrance gates such as this must be designed to provide the guard with an unobstructed view of both sides of the gate and to permit easy, rapid identification of persons entering the area.



No two industrial installations are identical in layout but a typical application, as shown here, will serve as a guide in the selection and location of protective lighting equipment.

Now what constitutes effective protective lighting? The IES Handbook provides the essential requirements:

"Protective lighting, to be effective, should:

(1) Discourage or deter attempts at entry by intruders. This may be accomplished by providing illumination in such a manner that a potential intruder will believe detection inevitable.

Although lighting is an effective tool, it should not be used alone. It should be employed with other measures such as fixed or patrolling guards, fences, alarms, etc.

Glare alone should not be relied upon to keep the intruder away. He may be able to shield his eyes enough to effect an entrance.

(2) Make detection certain should entry be effected. Protective lighting measures should not be confined solely to border areas unless a substantial guard is maintained.

(3) Avoid glare in the eyes of the guard. In every possible man-

(Continued on page 90)

MOBILIZE LIGHTING KNOWLEDGE TO ADVANCE AMERICA'S WELFARE

Maintenance allowance only under NPA was sufficient to relight 40 elementary schools in Louisville.

We are making progress in classroom lighting

by E. J. Good

Illuminating Engineer
Louisville Gas and Electric Co.
Louisville, Ky.

♦ A CHALLENGE was presented to the lighting industry in 1947 when it was stated at the International Lighting Exhibition in Chicago that 258,000 schools in America needed seven times more light to bring them up to recommended standards.

We have met this challenge and have made tremendous strides during the past five years in the school relighting program. Thousands of children who leave dim, poorly lighted classrooms each spring return in the fall to find their schools completely relighted with modern artificial illumination.

Proof that we are making headway in this undertaking is given in the encouraging progress reports from all over the country.

Denver, Col., reports relighting

This new million-dollar elementary school, The Sallie B. Rutherford School, Louisville, Ky., completed this summer, is lighted throughout with modern slimline Louisville Lamp Company fixtures 2-755L. Intensity is in excess of 35 ft-c. Interior reflectances conform to those recommended in this article.

a total of 1,700 classrooms in 80 public schools. Birmingham, Ala., relighted their public schools throughout to a level of 30 ft-c.

Louisville, Ky., Spokane, Wash., Dayton, Ohio, Chattanooga, Tenn., and other cities have also relighted, or are relighting, their entire public-school systems. Many smaller towns and rural areas are also making progress in this field.

How has this much of such a gigantic undertaking been accomplished?

It has been done by educating the educators.

It is certain that in every instance where a single classroom or several hundred classrooms were relighted, someone, either a school-board member, a school superintendent, a principal, a teacher, or a business administrator has been sold on better lighting to the point of enthusiastic belief that proper classroom lighting is a sound dollar-investment in building facilities and in eyesight conservation.

This program of educating the educators on the advantages of adequate classroom lighting is not an easy one. It is a large and far-reaching task, however it is a *must* if the schools of this country are to be properly illuminated.

Leaders in the program

Our electric industry must be the leaders in this educational program. Through our lighting specialists, equipment manufacturers, consulting engineers, and electrical contractors, the school authorities must be told and sold on the fact that properly installed classroom lighting will pay dividends in eyesight conservation and other benefits.

This educational program is a never-ending one, since school administrative personnel changes from time to time and the new personnel must be educated.

The utility company illuminating engineers have been and will probably continue to be the leaders in carrying the sight-light story to the school administrators. They have the specialized training and also the time to devote to the work. The other industry groups mentioned can and should

(Continued on page 86)

Recommended Lighting Levels for Schools

Type of area	Maintained Foot-candles
Classrooms—on desks and chalkboards	30 or more
Study halls, lecture rooms, art rooms, libraries, shops, and laboratories	30 or more
Classrooms for pupils with defective vision and those requiring lip reading. On desks, chalkboards	50 or more
Drafting, typing, sewing rooms	50 or more
Reception rooms, gymnasiums (for general exercise), swimming and pool areas	20 or more
Auditoriums (not for study), cafeterias, locker rooms, washrooms, corridors containing lockers, stairways	10 or more
Open corridors and store rooms	5 or more

Don't overlook office lighting

for new business

There are still a large number of offices in which the lighting is badly in need of improvement.

by Roy A. Palmer
Duke Power Co.
Charlotte, N. C.

◆ AT A TIME when the nation is again gearing for defense, it is only natural that much of the attention of the lighting fraternity is directed to industrial lighting.

In the rush to provide illumination for work areas, it should not be forgotten that office areas are equally important and offer a lucrative field for the contractor.

Whenever a product is to be manufactured, and during the time it is manufactured, a great deal of office work must be done.

Planning, designing, obtaining raw materials, expediting the work, time-keeping, payrolls, records, and a hundred other details must be accomplished in order to produce goods.

All these activities require good seeing to assure accuracy, speed, and proper co-ordination among various departments.

There are a great number of offices not connected with industrial plants which offer an equally fertile field for new lighting. Even though good lighting has been promoted for many years, and during that time many fine lighting jobs have been installed, there still remain a large number of offices in which the lighting is badly in need of improvement.

Many offices were relighted a few years ago to standards which at that time were considered excellent. They no doubt were the best that the lighting art could provide at that time, but new developments and practices have now rendered them out-of-date.

Field for development

Office lighting, therefore, offers a fine field for the development of new lighting business. Before tackling the job of selling this field, it is well to organize and prepare one's self so that time will be used to best advantage and so that the best possible service will be rendered to the customer.

Selling a lighting job is far from merely selling a number of lighting fixtures. Nor is it sufficient simply to sell the idea of a high foot-candle value. The control of glare or brightness, the improvement of contrast, the finish of the walls, ceilings, and desk tops are a few of the factors that should be considered in the lighting of an office.

The primary job for a lighting system is to provide illumination for seeing. It is a well-known fact that defective vision is more prevalent among older workers. Eyeglasses will assist these individual workers, and well-engineered lighting will likewise assist them.

These facts constitute a powerful selling tool, but unfortunately they have been used too seldom. How many office managers know that good lighting aids the visually handicapped to a greater extent than those with perfect vision?

If this is realized together with the fact that a considerable percentage have defective vision, good lighting obviously becomes imperative. It cannot be refuted that eye comfort makes better workers.

There are tables which have been published showing the foot-candle level recommended for various visual tasks. Someone may ask why these values are

higher than those of a few years ago.

These tables are based on the availability of light sources and lighting equipment to provide these levels of illumination with consideration to eye comfort and costs. The progress made over the years has permitted an increase in these values.

It should be kept in mind that these are not the optimum levels but rather an index which can be a guide to today's lighting levels. As the lighting art progresses further through the improvement of present light sources and the development of new ones, together with equipment which will guarantee eye comfort at higher levels, these recommended values will be raised.

While the layman may think that illumination levels cannot possibly go higher, it is only necessary to point out that outdoors on a cloudy day the illumination is quite comfortable and yet the foot-candle level may range as high as 500.

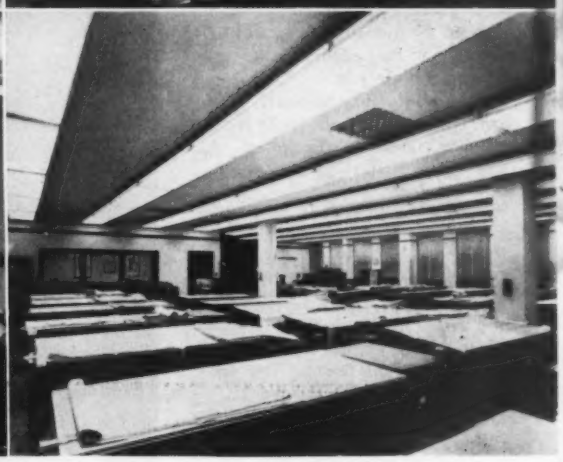
Then, too, if we look back to 20 or 30 years ago, the lighting levels in use generally were very low compared to the range found today.

In an office, the occupants use their eyes for concentrating on work over relatively long periods of time. When we realize that the process of seeing involves the partnership of light and vision, we can appreciate that the lighting must be engineered to provide the best in eye comfort and visual acuity.

This means that foot-candles alone are not sufficient though they should, of course, be of a high level. Any undue brightness will reduce the visibility of fine detail and, in many instances, cause discomfort.

The luminaire may be poorly

(Continued on page 89)



(Top, left) Two 40-w fluorescent lamps in units spaced 6½ ft apart provide 50 foot-candles on desks. (Top, right) Workers see easily, quickly, and safely in this office equipped with 45 foot-candles. (Bottom, left) Fixtures containing two 40-w fluorescent lamps are spaced 8 ft apart and suspended 1 ft from the ceiling, provide 45 foot-candles. (Bottom, right) Illumination of 100 foot-candles is emitted in this drafting room from fixtures containing four 75-w fluorescent lamps in continuous rows spaced 6 ft apart.

How good home lighting contributes to the defense program

◆ ONCE AGAIN rumors of war and preparations for defense are beginning to have a devastating effect upon the availability of civilian goods.

Item after item is disappearing from the stores and conditions promise to become tighter as government controls and restrictions of metals and other armament essentials take effect.

As limitations increase, what will be the fate of residential lighting?

Merely providing light is not providing GOOD *light.* And good light is as important in the home as in industry. Conservation of eyesight is the objective, and attainment of that objective is more than an 8-hour job.

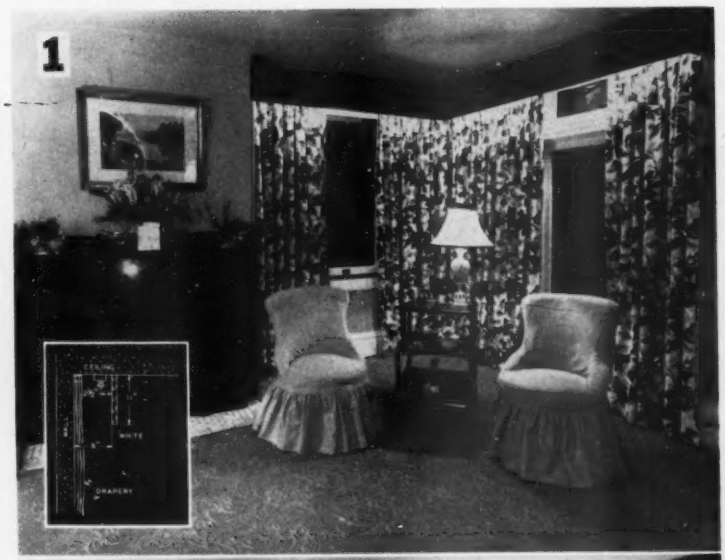
Make no mistake about it; pleasant, cheerful, and adequate lighting conditions in the home do make a contribution to the defense program.

During World War II, the value of good lighting in industry and offices was recognized and provided to insure worker efficiency. Unfortunately, the awareness of the relationship between good lighting and comfortable seeing was not carried beyond the factory and office into the home.

It must be admitted very frankly that, in a large measure, the electrical industry together with the home-builders of this country are largely to blame for this condition.

If you are an architect, builder, electrical contractor, or lighting

(Photo No. 1 courtesy West Penn Power Co.)



by Myrtle Fahsbender
Director of Residential Lighting
Westinghouse Electric Corp., Lamp Division

Conservation of eyesight is more than an 8-hour job

salesman—you are, as a group and as individuals, greatly responsible for the *inadequate* lighting in homes today, and for the good job that is being done in *underselling* home lighting.

I regret the need for such a drastic charge, but I do want to jar you loose from your indifferent attitude toward the subject.

Surely you are not proud of the fact that allowances for lighting equipment are often less than ¼ of 1 per cent of the cost of a home; that ceiling fixtures are almost non-existent; and that few if any of the newest lighting techniques are incorporated in our new homes.

Why this constant selling home lighting down instead of up?

You don't see the plumbing contractor permitting the budget slash to go in his direction. It doesn't happen that way—the electrical contractor takes the cut.

Tile bathrooms cost from $1,000 to $2,000 per bathroom (and two bathrooms are not uncommon in homes today), but how much for lighting in that same home? About $30—maybe.

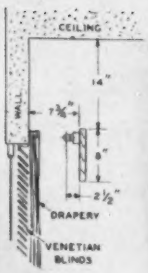
1920 fixture allowance

Conversely, I am told that in the 1920's, the average fixture allowance per home was $150. Progress—in what direction?

We, as an industry, should apologize to the American homemaker for the lighting she has never had.

And don't let us make excuses by saying that the public won't pay for better home lighting. Ask any home-lighting consultant who has planned a good home-lighting job what the contractor, the architect, and fixture salesman do to the lighting recommendation and how good they are at un-selling the customer. You'd think the contractor wasn't interested in selling wiring or the dealer in selling equipment.

Whenever you want to fall back on the excuse that the customer won't pay for good home lighting, take a look at the homes where you see a T-V antenna. Yes, the item is different, but T-V has been sold just like modern kitchens have been sold—



when are we going to begin to *sell* home lighting?

There isn't any excuse except plain inertia. Today, we have the best selection of fixtures we have ever had; we have a wide choice of incandescent and fluorescent light sources for any lighting design; we have new ways of adding beauty and charm to a home by valance, cornice, cove, and other decorative lighting effects.

Furthermore, we have consumer literature that shows good home-lighting practice to the nomemaker, and to aid the industry there is an abundance of printed educational literature from the Illuminating Engineering Society, the Edison Electric Institute, lamp bulb manufacturers, and fixture manufacturers.

IES brochure

If you have any connection with residential lighting and are really interested in helpful suggestions and information, send a dollar to the Illuminating Engineering Society, 1860 Broadway, New York City, for a copy of their new 8½ x 11 brochure, entitled "Contemporary Lighting in Modern and Traditional Interiors."

This book of 58 pages is crammed full of lighting ideas for the home with illustrations and essential scale drawings. The book was written (in layman's language, by the way) because so few in the industry know the requirements of proper dimensioning and installing of valance, cove, cornice, and decorative lighting.

If this new type of lighting is properly done, it is well worth the time and effort and the cost is not prohibitive.

Only when a home-lighting consultant has been on a job will you see lighting as well done as illustrated in these pages.

Homes lighted like these are few and far between, but they need not be if the architect, and the electrical contractor especially, know enough about the requirements to make such installations.

The interiors shown indicate various ways lighting can be used for "defense of eyes" and for decorative effect.

Example (1)—This is a good place to begin—not a new modern home, but a redecorated 100-year-old house where the traditional black-marble fireplace blends with the charm of concealed modern lighting over the windows.

At night, the draperies may be drawn and their texture, pattern, and color enhanced by light from the fluorescent tubes mounted end-to-end on the ceiling directly behind the valance board.

The light is distributed down the curtains because (1) the valance board is out 8 inches from the wall; (2) the fluorescent wiring channel (which is white—not dark-brown) is mounted close to the valance; and (3) the inside face of the valance is painted white for light reflection.

As a rule, a valance may vary in over-all height from top to bottom from 6 to 10 inches depending on the height of the ceiling and the length of the valance. The distance from the wall to the inside face of the valance should never be less than 6 inches.

Yes, whether it is a Southern Colonial home or a modern ranch-type house—good lighting from today's modern light sources is appropriate.

Example (2)—Without the warm glow of artificial light in this bay window, the night-time result is a dark, uninteresting recess. All that is needed to bring daytime beauty to the window area and color to the plants is the use of one 40-watt fluorescent tube.

The wiring channel (including ballast) is mounted on the dropped ceiling of the bay directly behind the fabric-covered valance.

Example (3)—For people who enjoy reading in bed, but are adverse to bedside table lamps, here is a good idea. Incidentally, a source of light at your back and above your head (on the wall, in other words), has been proved by test to provide the most convenient and comfortable light for reading in bed.

Wiring channel

The wiring channel (including ballast) for a 40-watt, 48-inch fluorescent tube is mounted on a ½-inch-wide wood strip which has been attached to the wall. The shielding board (about 52 inches long) can then be secured to the wood strip, eliminating the need of additional holes in the wall.

The inside face of the shielding board must be white as well as the wiring channel, but the out-

side face may be painted the wall color; wall-papered; covered with fabric or mirror.

Be sure that the bottom edge of the board is about 30 inches above the mattress top. If a doorway should be located where the chair or chest is in this room, it would be best to cover the top opening with a lightly etched glass to prevent seeing the lighted tube.

This type of installation provides glareless light for the reader and some upward light in the room, thus producing a combination of light distribution that makes reading easy and pleasant.

Example (4)—Two lighting systems were desired in this dining room: one to provide soft, general room illumination; the other to accent the table accessories. A requisite was that the lighting elements should be functional and of modern design as a direct contrast to the earlier period decorations of the room.

To produce an acceptable light distribution, the cove had to be carefully designed for the low 8-foot ceiling. The shallow cove depth (2⅛ inches), the wide, gradual curve from wall to front edge, and the tube placement are all essential features. Thirty-watt fluorescent tubes mounted end-to-end are used with ballasts installed in the basement.

To give sparkle and accent to the table appointments, a downlight type of fixture (not shown) is recessed in the ceiling over the center of the table. In most interiors of this decor, a sparkling crystal chandelier is usually desired but there are those who wish a more contemporary approach and here is one that has met with acceptance.

Examples (5A) and (5B) — These two illustrations show opposite ends of an apartment living room. This has been home to these renters for 15 years. That would have been a long time to live with poor lighting and unattractive decorations. So they did something about it, and here is an example of what light, paint, and ingenuity can do.

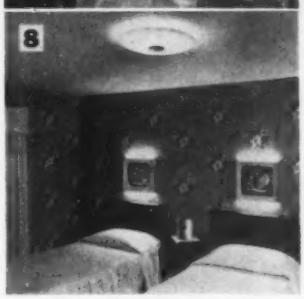
Across the window end of the room (5A) a wall-to-wall board conceals a continuous line of slimline fluorescent lamps. See sketch. To balance this lighting effect on the opposite wall, which is painted a darker harmonizing color, a similar installation is made.

Here two 72-inch slimline tubes are used with individual switch control so that the drapery section or the picture wall may be lighted separately or both illuminated as shown. The draperies conceal double doors that open into a large closet made possible by removing an in-the-door bed.

Here then, in a traditional interior, is general lighting in the modern manner, while floor and table lamps continue their essential role of providing light for reading, sewing, and writing.

Examples (6A) and (6B)— From this day forward, *never* install an exposed 32-watt circline in the kitchen. The fluorescent circular tube produces about the same amount of light as a 100-watt incandescent bulb and the resulting illumination from either one is insufficient for the average kitchen.

If you choose fluorescent, the minimum total lamp watts should be 80 for an average-sized kitchen or 50 watts for a smaller apartment kitchen. Now, you can select attractive close - mounted units using either two 25-watt, four 20-watt, or two 40-watt fluorescent lamps shielded by plastic. See Example 6A.



For those who prefer incandescent lighting, one of the ring-louver fixtures for a 200-watt silvered-bowl bulb (150-watt for a small kitchen) provides very pleasant totally indirect lighting.

No kitchen-lighting plan is adequate without light at the sink. Where there are cabinets on either side of the over-sink window, a valance board between the cabinets can be a shield to conceal the light source.

Let your budget be your guide as to whether a silvered-bowl incandescent bulb, or a fluorescent tube is used. Use the length of tube that will best reach the entire length of the valance.

If 20-watt, 24-inch; 25-watt, 33-inch; or 30-watt, 36-inch tubes are used, two should be installed and they must be located as close to the valance as possible.

In some remodeled kitchens, where the sink is not under a window, as in Example 6B, under-cabinet units will provide

(Continued on page 88)

MOBILIZE LIGHTING KNOWLEDGE TO ADVANCE AMERICA'S WELFARE

This is the entrance to the Sakowitz store in Houston, Texas, featuring S-shaped recessed fixtures, each employing four 96-inch slimline lamps. The recessed incandescent fixtures are 300-watt louvered units. The cove at each side contains 25 MM, 120 MA cold-cathode tubing.

Use your imagination *in store lighting*

Store designers selected concealed fixtures for Houston's ultramodern, fashionable department store.

by H. G. Hrivnatz
Lighting Engineer
Houston Lighting & Power Co.
Houston, Texas

◆ THE ATTRACTIVE Sakowitz store located in Houston, Texas, had its grand opening recently with huge crowds filling its spacious floors. This new star in the skyline of Texas has already established itself for its unusual design, in both the exterior and interior treatment of the store.

The lighting effects created throughout the store are unique, in that concealed light fixtures were used, employing fluorescent, incandescent, cold cathode, and slimline light sources. Several hanging chandeliers were used to

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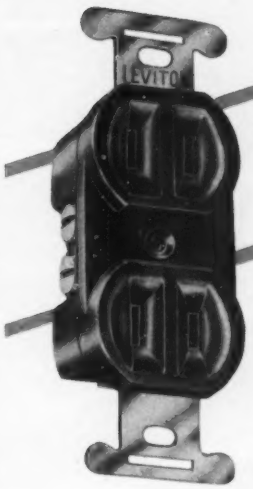

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add charm and a pleasing effect to some of the areas.

Sam J. Brochstein, a charter member of the San Jacinto Section of the Illuminating Engineering Society, is credited with the pleasing effect achieved in the lighting design of this store.

He asked Harry Hrivnatz, lighting engineer for Houston Lighting & Power Company, to check his layouts, and in so doing a slide rule was almost worn out because many calculations were performed to determine the foot-candles that could be expected.

In some departments, it was necessary to make four separate calculations to determine the foot-candles, namely the combined foot-candles expected from fluorescent, slimline, cold cathode, incandescent PS and R-40 type of lamps.

Foot-candle levels

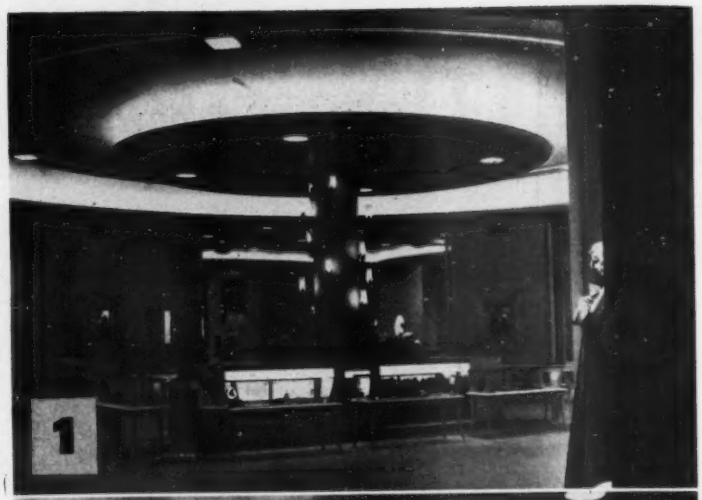
Mr. Brochstein has done an outstanding job in designing a lighting installation to give a delightful atmosphere by using a combination of these different light sources and still have the over-all picture harmonize with the architectural design of the store. The foot-candle levels, generally speaking, were designed to run from 30 to 45, in service, and vary according to the department.

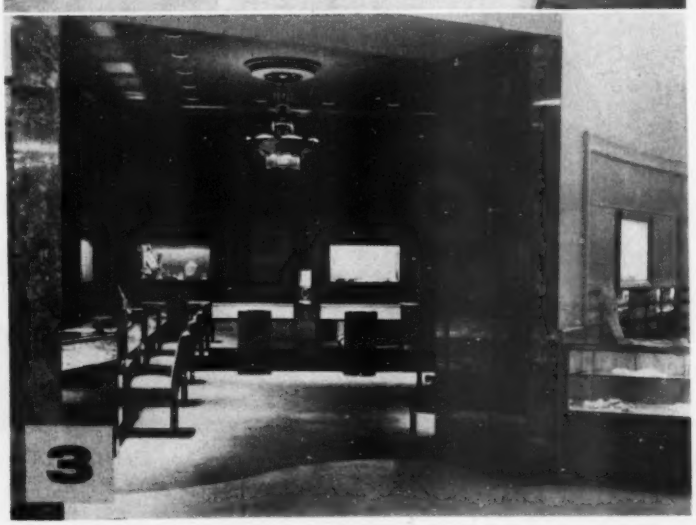
The small additional lighting obtained from illuminated wall and show cases, wall niches, island displays, etc., does not add much to the general lighting level, but it is considered most important in attracting the customer's eyes to the merchandise.

The store designers were I. S. and S. J. Brochstein, who are noted for their outstanding store designs throughout the nation. They visited many of the well-known stores in the country, and combining the experience thus gained with their own creative ability, have come up with a new concept in store design.

Much of the new store's uncrowded appearance and soothing appeal is due to its well-selected color combinations and tastefully designed wall and show cases and furniture, all of which contribute to the over-all impression of spaciousness.

Alfred C. Finn, the architect,





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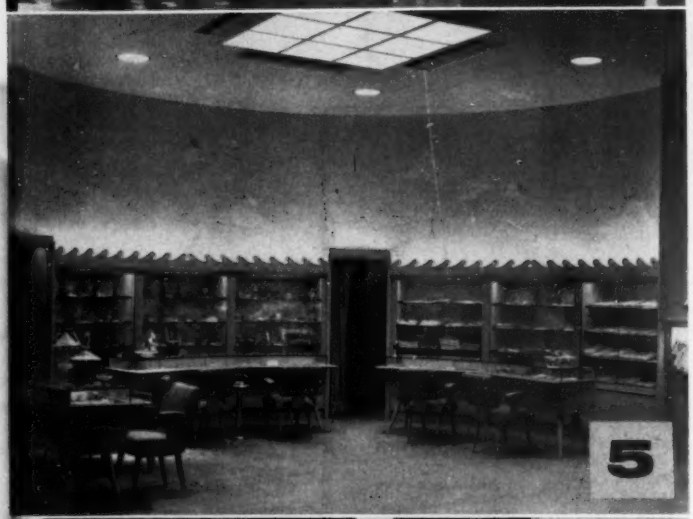

has created an ultramodern building by his design and the use of white marble. The building gleams brightly under the Texas sun during the daytime, and at night is highly visible from the illumination furnished by the street lights.

Detailed information

The numbered paragraphs that follow give detailed information on the lighting effects illustrated in the photos identified with corresponding numbers.

(1) There's artistry in lighting effects as shown in this spectacular view of the accessory bar and the millinery department in the background.

The generous use of 120 MA, 25 MM cold-cathode tubing in the coves and 300-watt recessed incandescent units combine with the center-column decoration of a lovely wrap-around chandelier to create a beautiful selling atmosphere.

The 60 foot-candle accent lighting in the show cases is produced by 72-inch slimline lamps. The general lighting intensity is 25 foot-candles.

(2) Boy's suit department is uniformly illuminated by means of artificial skylights employing six 40-watt fluorescent lamps. Incandescent lighting fixtures alternate with the fluorescent units to give approximately 40 foot-candles.

Show cases

The merchandise in the wall cases and the upper side walls is illuminated by 40-watt fluorescent lamps. The show cases employ 72-inch slimline lamps to give approximately 50 to 70 foot-candles on the shelves.

(3) The fine jewelry department uses a dark-blue ceiling and dark-turquoise carpet combined with a direct system of lighting to make the jewels stand out in their sparkling beauty.

Recessed fixtures on 3-foot centers give approximately 150 foot-candles on the counters. The wall show windows use two 150-watt incandescent lamps and one 40-watt fluorescent for their illumination.

The floor cases use slimline to

(Continued on page 85)

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LIGHTING PROGRESS IN THE SOUTH

STORE—Sam's Style Shop, Pensacola, Fla. Lighting designed by Albert Klein, Jr., Gulf Power Co. Three continuous rows of staggered strip fluorescent units in coves, numerous downlights, and a row of strip fluorescent on top of wall cases supply 50 ft-c in this attractive shop.

OFFICE—Capitol Hill Building and Loan Assn., Oklahoma City, Okla. Lighting installed by K. C. Bare Electric Co. Mitchell Modular units provide 68 ft-c in this 30 ft. by 40 ft. office having 12 ft. ceiling height. Each unit contains four 75-watt, 96-inch T-12 slimline lamps.

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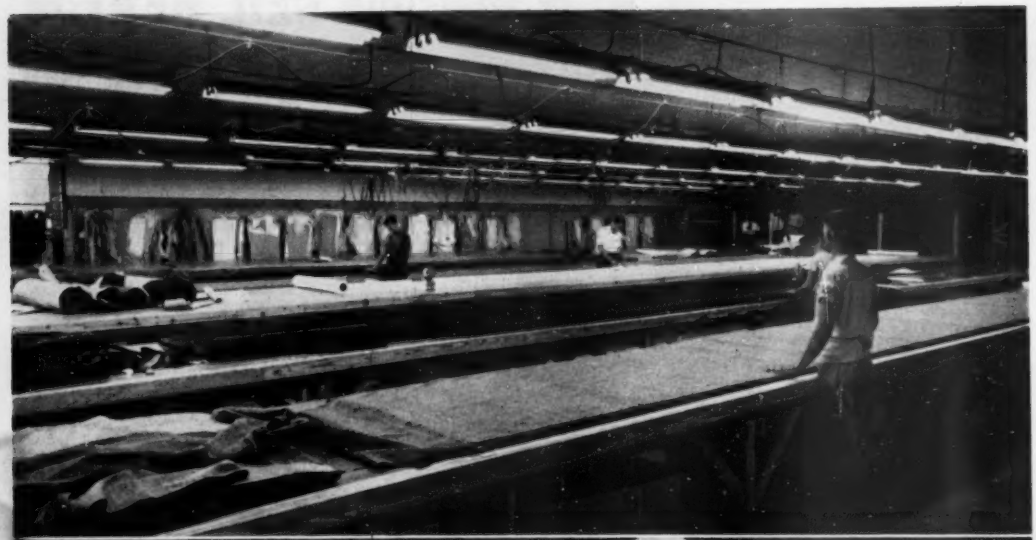

FACTORY—Roxana of Texas, Waxahachie, Texas (dress manufacturer). Lighting designed by J. B. Deck, Jr., Texas Power and Light Co. Uniform illumination of 70 ft-c is obtained from 5 rows of two-40-watt industrial type units mounted 5 ft. above cutting tables. Rows are 10 ft. apart.

BANK—Title Guarantee & Trust Co., of Baltimore, Md. Lighting designed by H. M. White, of Consolidated Gas Electric Light and Power Co. Each ceiling unit consists of four 12-in. Holophane lens plates with four 300-watt lamps. Ceiling height, 20 ft. Maintained intensity, 35 ft-c.

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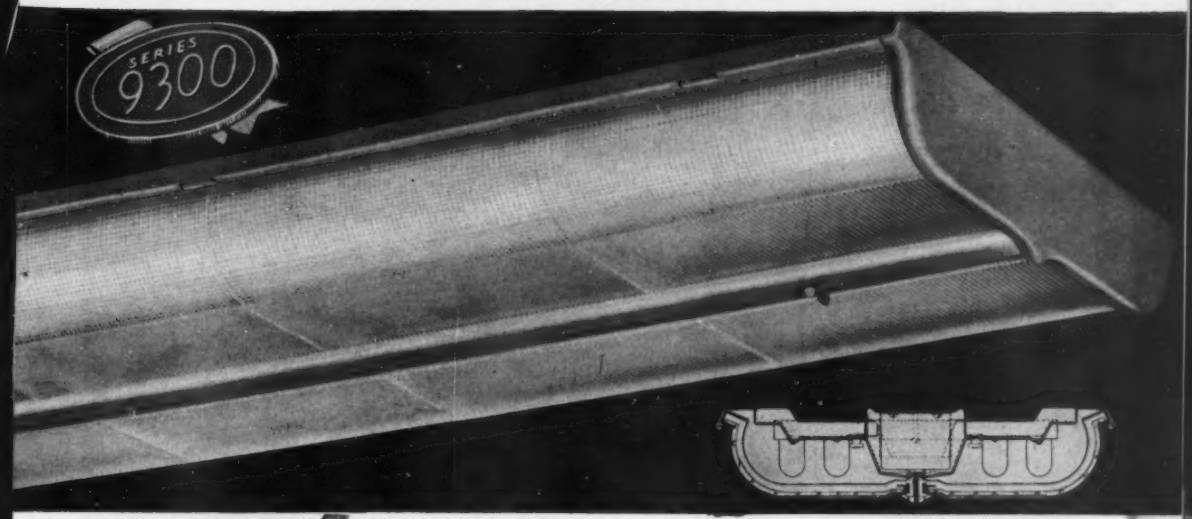

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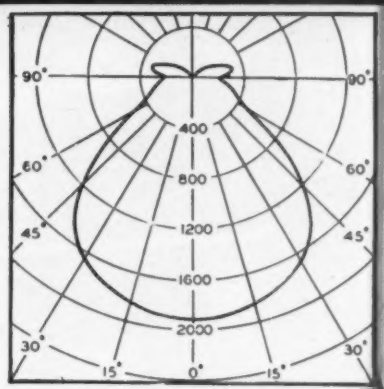

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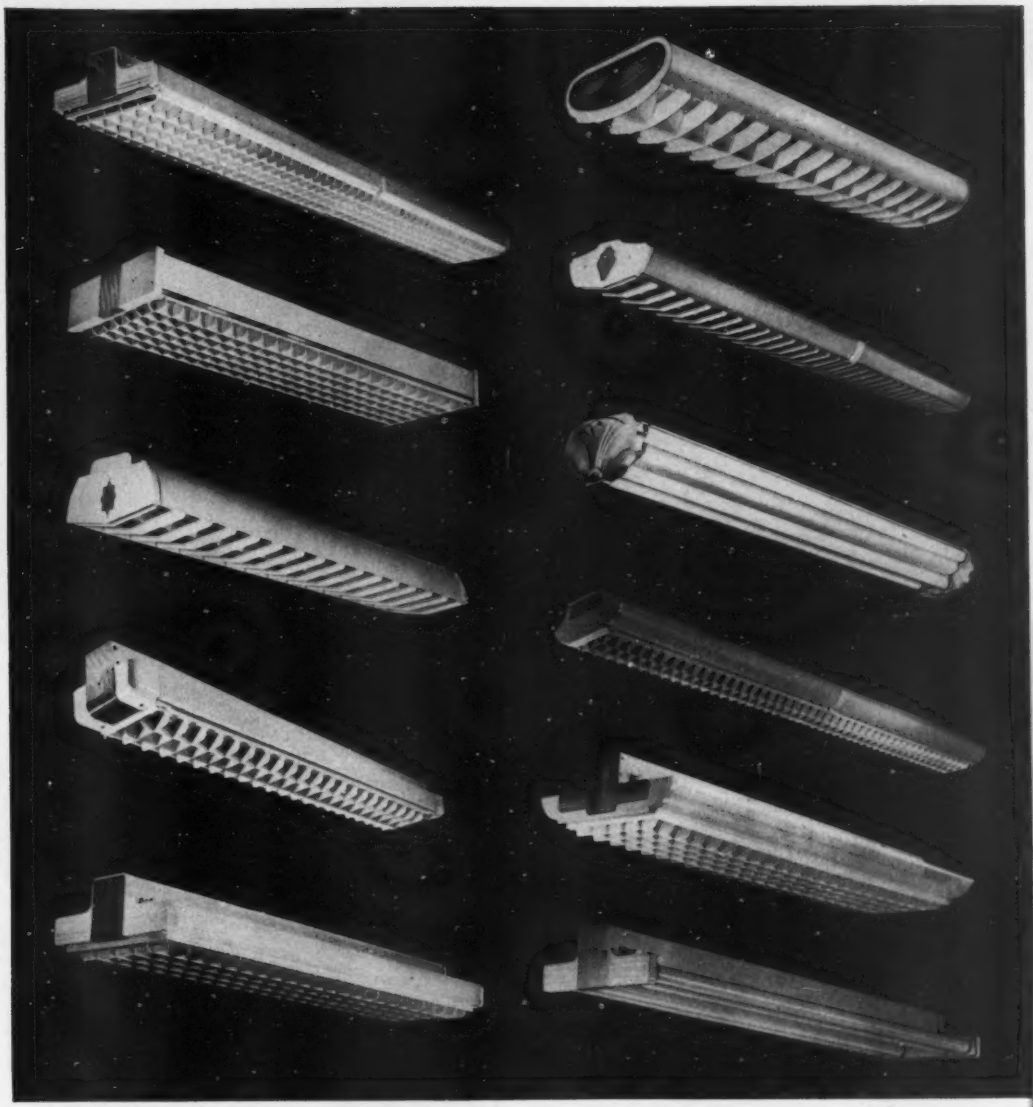
OFFICE—U. S. Rubber Co., New Orleans, La. Lighting installed by Weisfeld and Sons. This new office and plant makes use of some 260 Sunbeam units. These are 4-tube, 430 MA, slimline fixtures. Approximately 65 ft-c are maintained throughout the building.

STORE—Strasburger's, Knoxville, Tenn. Lighting designed by Leslie B. Pierson, Knoxville Utilities Board. Note the 150-watt R-40 floodlights on ceiling which illuminate dresses from shoulder to hem. Units are 4 ft. apart and are located about 4 ft. out from front line of cases.



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LIGHTING PROGRESS IN THE SOUTH

GYMNASIUM—Masonic Widows and Orphans Home, Louisville, Ky. Lighting designed by E. J. Good, Louisville Gas and Electric Co. Hub fixtures with wire guards, and lamped with 300 watts each, provide 35 ft-c. Spacing of units is 10 ft. by 10 ft.; ceiling height is 28 ft.

RECEPTION ROOM—Dr. C. O. Templeton, Valdosta, Ga. Lighting designed by W. H. Sadler, Georgia Power and Light Co. Above the louvered ceiling are cool white lamps on 12-in. centers with sun lamps in between. A germicidal lamp provides ultra violet rays.

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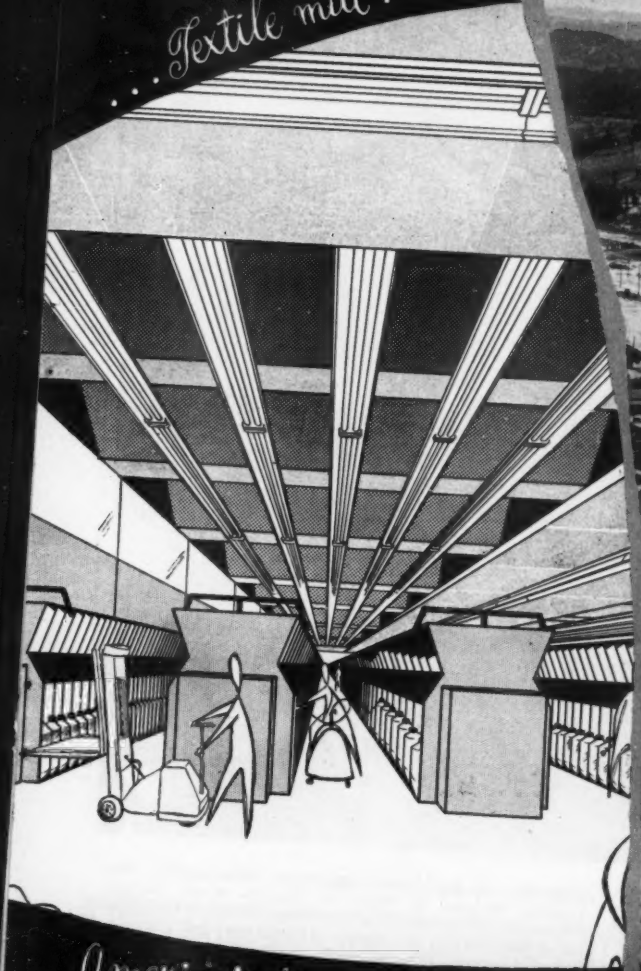

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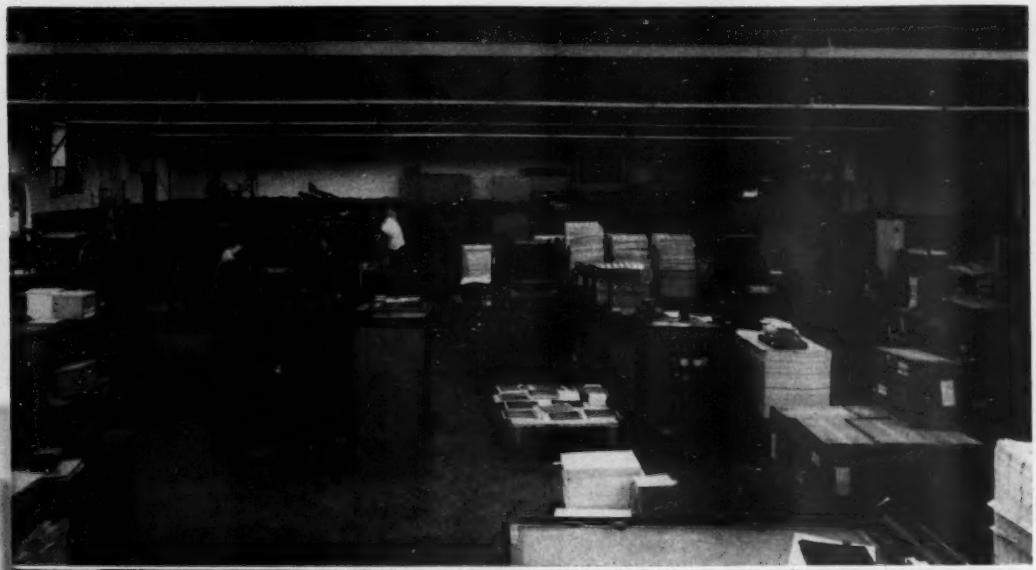
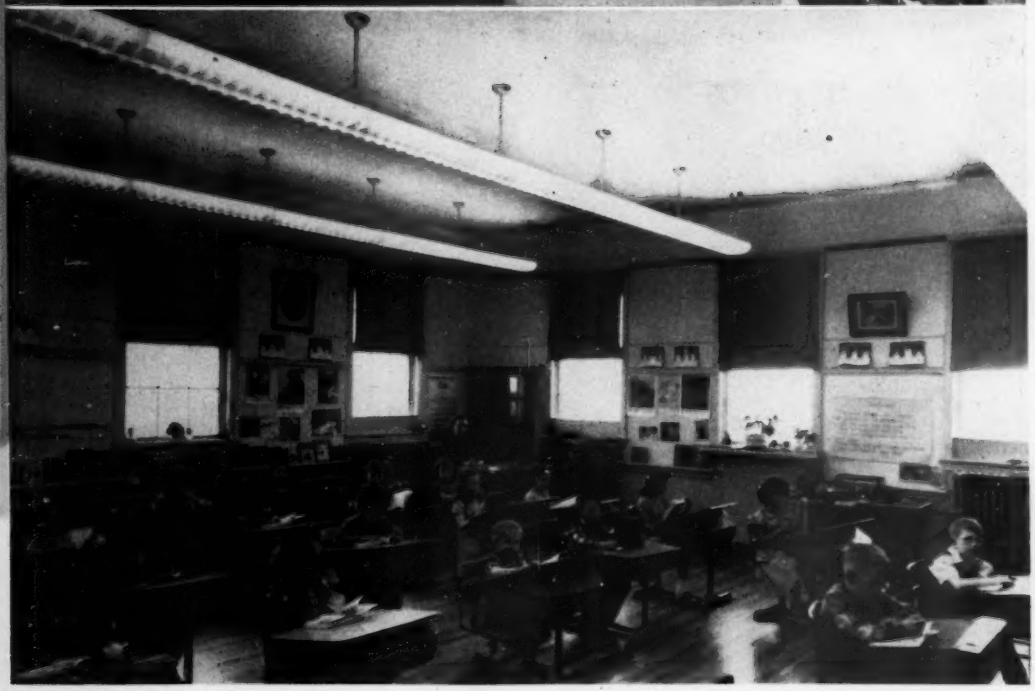
CHELSEA 50 MASSACHUSETTS

LIGHTING PROGRESS IN THE SOUTH

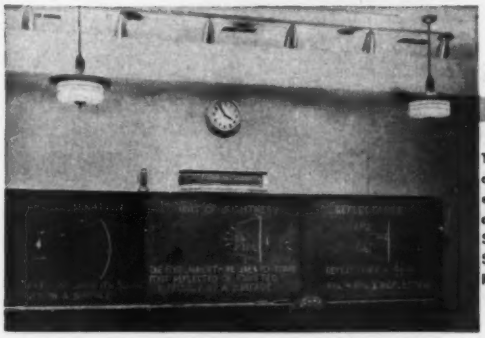




INDUSTRIAL—Cornay Press, New Orleans, La. Lighting designed by E. R. Tschirn, New Orleans Public Service, Inc. Five continuous rows of 200-watt industrial fixtures on 12 ft. centers and mounted 10 ft. above the floor give an intensity of 50 to 75 ft-c on the working plane.

SCHOOL—Second Grade Classroom, Washington, Mo. Lighting designed by Morris V. Harmon, Union Electric Company of Missouri. A project begun in 1949 to relight all of Washington, Mo., public school classrooms was completed this year. This typical room has 35 ft-c on desks.

SWIVELIER Lighting Fixtures—
Adjustability At Its Best!



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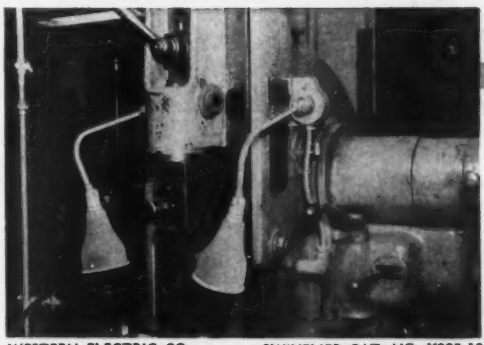
The Minneapolis Board of Education after consulting with nine (9) lighting engineers, Public Utility Lighting Experts and conducting extensive tests, specified SWIVELIER adjustable fixtures for use on Standard Raceways for ALL blackboard Relighting jobs in Minneapolis.



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LIGHTING PROGRESS IN THE SOUTH

HOME—Den in home, Waco, Texas. Designed by Miss Kaye A. Leighton, General Electric Co., Nela Park. Lighting includes eight recessed units in four rows. Each unit is lamped with two 40-watt lamps. Cornice conceals row of 40-watt warm-white lamps; 20-watt lamp in mantel.

OFFICE—President's office, Lamar Life Ins. Co., Jackson, Miss. Designed by Jack Canizaro, architect, and W. W. Huntley, Mississippi Power and Light Co. Twelve 40-watt lamps are mounted above 10 ft. square louvered area. Three 150-watt recessed units provide 75 ft-c on desk.

PRESCOLITE recessed lighting fixtures PRESCOLITE recessed lighting fixtures

PRESCOLITE recessed lighting fixtures PRESCOLITE recessed lighting fixtures PRESCOLITE recessed lighting

PRESCOLITE recessed lighting fixtures PRESCOLITE recessed lighting fixtures PRESCOLITE recessed lighting

Styled for sales appeal

FREE! This attractive display is available free with merchandising deals. Prescolite display sells on sight . . . assures quicker turnover with *increased sales and profit.*

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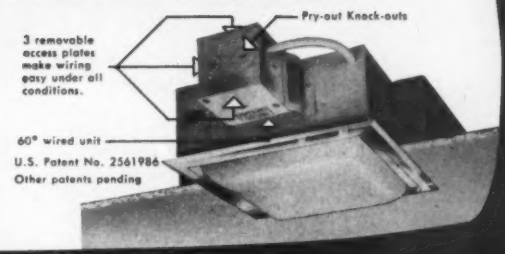
When you buy Prescolite — you can sell *complete lighting satisfaction.*

A complete line of fixtures. *No asbestos wire required,* use any approved building wire.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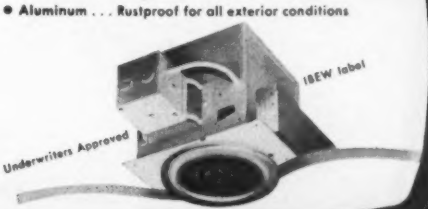

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The field for better lighting in industry is unlimited! Surveys show that approximately 60% of industrial plants are inadequately lighted. "See Better . . . Work Better" aims to correct this by showing industry how better lighting can boost production, reduce accidents, improve morale, cut rejects. National magazine advertising, direct mail, special "See Better . . . Work Better" booklets and bulletins are helping to sell plant management on better lighting.

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The opportunity for you in General Electric's "See Better . . . Work Better" program is tremendous. This program provides a rallying point for your sales efforts. It gives you the facts and figures on lighting that make your selling more effective. And it's backed by General Electric's intensive promotion and advertising to utilities and industry.

Tie in with the "See Better . . . Work Better" program NOW. Talk "See Better . . . Work Better" on your calls. Use the free "See Better . . . Work Better" sales kit. Make sure your industrial lighting prospects know all the benefits that good lighting brings . . . and that you get the bigger lighting contracts that result.

FULL PAGE ADS. "See Better . . . Work Better" is being featured in General Electric magazine advertising that reaches an overwhelming percentage of plant management. "See Better . . . Work Better" ads are running in Purchasing, Electrified Industry, Modern Industry, Mill and Factory, Time, Business Week, and the Saturday Evening Post.

GENERAL ELECTRIC

MODERN METHODS

Ballasts rated as to noise level

♦ A NEW SYSTEM of "Sound-Rating" fluorescent lamp ballasts to improve installations of fluorescent lighting systems has been developed by one manufacturer.

Based on a scientific measurement of the average sound levels produced by certain ballast designs, the new rating groups ballasts into six classifications, ranging from "A"—extremely quiet, to "F"—quite audible. Use of these classifications along with consideration of other noise-contributing factors, such as ambient sound levels in different types of rooms, will result in the most satisfactory fluorescent lighting installations.

For example, if fluorescent lighting is desired in extremely quiet locations—as in churches or broadcasting studios—only lamps which can be powered by "A"-rated ballasts should be considered for normal installations. In applications where higher ambient noise levels are prevalent, lamps using ballasts rated as "B," "C," "D," "E," or "F" may be employed, depending upon the location's "tolerance" for increased noise.

Of course, all fluorescent ballasts, regardless of the manufacturer, produce some audible hum. However, the prominence or disturbing effect of the sound can be controlled to an appreciable extent by consideration of the following factors: (1) the nature of the ballast-produced sound—its intensity, duration, and component frequencies; (2) the construction and mounting of the fixture; (3) the ambient noise level of the room; (4) the acoustical properties of the room; (5) the number of fixtures installed; and (6) listener reaction.

Certain ballast models are noisier than others because of inherent characteristics, such as core construction, manufacturing processes, and volt-ampere rating. All other things being equal, the higher the volt-ampere rating, the higher the level of sound produced.

While the ballast is definitely the generator of sound, any portion of the fixture which can be excited by the ballast may amplify it. Fixture components which are likely to respond to this vibration are louvers, shields, reflectors, and all sections of the channel structure. Such parts must be securely held in position or shock-mounted to prevent vibration.

Fixture mountings must also be designed to prevent transmission of ballast vibration to the supporting structures. This condition can be corrected by isolating the fixture with sound-absorbent material.

Noise ambients in particular locations where fluorescent lighting is to be installed may vary greatly—from 20 decibels in a broadcasting studio, for example, to more than 60 decibels in an average factory. These noise levels will dictate the sound-rating classification of the ballasts used in each location. For instance, an "A"-rated ballast would be recommended for a church, "B" for a quiet city residence, "C" for a public library, etc. Of course, ballasts from any preceding letter group may be used in place of the letter group called for (such as "A"- or "B"-rated ballasts for the library) with assurance of as good, or better, results.

Other characteristics of the installation site to take into con-

NEW
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DUST-TIGHT
LIGHTING
FIXTURES
...for hazardous locations where flammable or explosive dusts are present. Class II, Groups E, F, G and Class III.
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R & S Type DL Lighting Fixtures contribute outstanding advances in fixture construction and installation simplicity! They operate very cool – 'way below allowable temperatures for this type of installation.
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sideration are the possibility of the ambient noise level changing for a particular location, the effect of the acoustical nature of the room on noise level, and the number of fixtures required for adequate lighting.

Lastly, it was noted that the individual personalities of the people who will use the fluorescent-lighted room must be taken into account. Different listeners often react differently to the same quality or quantity of sound. Considered in this manner, sound loses its identity as a physical phenomenon and becomes one of a psychological nature.

Communication sets speed service

by C. E. Wright

♦ To GIVE faster service to its customers, the R. L. Millican Electric Co., 2618 Pearl Street, Jacksonville, Fla., has recently equipped four trucks with two-way radio communicating systems and has two more trucks on order which will be similarly equipped.

This equipment, says Mr. Millican, has already accomplished what it was expected to do. It enables him to know where the trucks are at all times, and gives faster service on emergency repair jobs and on contract work. The radio system has been especially useful in communication between the office and construction jobs where telephone service is not conveniently available.

The system is similar to that used by police cars and taxicabs. It operates on a wave length set aside for the purpose by the Federal Communications Commission. The FCC does not readily grant permits for the operation of such systems, but approval can be obtained when the purpose is one of public service such as electrical work.

Millican's system operates on the call KID-454 and the trucks, including the two to be added to the fleet, have numbers ranging from 101 to 106. While the call message from the office or from another truck is heard in all trucks, the driver answers only his own call number.

If a mechanic is on a job, but does not have with him the necessary parts, a call to the office quickly brings another truck with whatever is needed, even though it has to be picked up from a local jobber's stock.

The radio system has not only made it possible for the Millican organization to work more smoothly, but has brought new customers through emergency calls.

Two-way radio communicating systems have enabled R. L. Millican to know where his trucks are at all times and to give faster service on emergency repair jobs and on contract work.

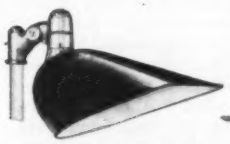
The wall that can't be climbed!

A wall of brilliant light is a barrier no intruder can scale, no prowler can penetrate without exposure. Today, more than ever, this screen of protective lighting is a vital security measure, especially for plants engaged in defense work.

Appleton Floodlights are scientifically designed to guard industrial properties, while providing the good light necessary for best working conditions. The Elipso Standlite, for instance, rings your plant facilities with a broad band of illumination when properly spaced along a fence line or mounted on buildings.

For fixtures that meet every industrial requirement—including hazardous locations—whether indoors or out, contact Appleton, pace-setting manufacturer of electrical equipment for nearly half a century.

ELIPSO STANDLITE
Expertly designed to provide protection for industrial properties. Mounts on pole or wall.



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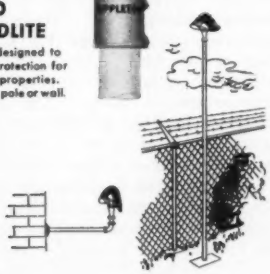

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In street decoration, construction lighting, carnivals, roadside stands, etc., their ease of installation and convenient flexibility is unsurpassed.

Insist on UNION'S PIN TYPE SOCKETS — the FIRST and the BEST.

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Have you hit the ceiling?

These case histories indicate the importance of checking the legality of wage increases

*by Edwin Pearce**
Attorney-at-Law
Atlanta, Ga.

♦ JIM MCDONALD pushed against the back of his well-worn executive's chair and closed his eyes tightly. His feeling was that of a man who had just met and solved a crisis. He also felt uneasy.

This particular crisis had been in the making for some time. When Jim first heard of a freeze on salaries and wages, he had automatically thought of his service manager, Bill Reid. He knew then that he was not paying Bill enough money, but, Bill had not pushed him for more money. Besides, a man who was loyal while the company was growing could expect good treatment later. Still, other people, making more money than Bill, had changed jobs.

No man is indispensable, reasoned McDonald, but his business instinct told him he had better keep this man. And when he lost one of his two shop employees and could not find a replacement, he knew he HAD to keep him.

He did not mention the matter but he was glad when Bill did. Something about the reluctant manner in which Bill spoke to him caused him to make an instant decision. Jim offered Bill considerably more money than he was receiving, the very most that Jim could afford to pay, which was still something short of what Bill could get elsewhere. He knew when Bill left that he had solved the problem. He also felt that he might have violated the wage regulations. He only felt this, and he was glad that he didn't really understand the regulations and therefore didn't really know whether he had violated them or not.

Although a small operator, Jim was not a bad executive. Having made a decision, he now resolved to put it behind him and worry about something else.

Law was violated

Jim McDonald in this particular case violated a law of the United States. Not maliciously, but maybe wilfully, within the legal meaning of that word. If Jim forgets his resolution not to worry, and makes inquiry, no one can tell him what will happen to him. Maybe nothing at all. There are, however, many things that CAN happen to him. The criminal penalties include a fine or imprisonment or both. The civil penalties include government injunction. And there is another provision tucked away in the law which may give unexpected trouble at unexpected times. The act authorizes the president to direct the collector of internal revenue, for income-tax purposes, to disallow as a cost of doing business, either all or any part of this unlawful wage. Every week he is handing Bill a check which he may not be allowed to deduct on his income-tax return as a cost of doing business. Note that he may lose the entire amount of his wage, not just the amount by which the wage exceeds the lawful wage.

There are still further implications. For example, Jim has also to deal with ceiling prices for

---

**Edwin Pearce has been an attorney in Atlanta, Ga., since 1929. He is familiar with government regulations as he was chief price attorney for the Southeastern region of the old OPA and was also chief price executive for the Southeastern region. For obvious reasons the names and circumstances cited in this article have been changed. The problems, however, are real.*

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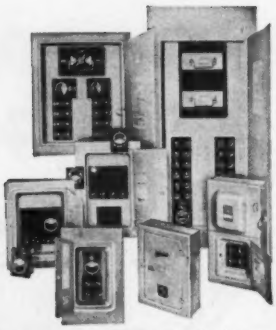

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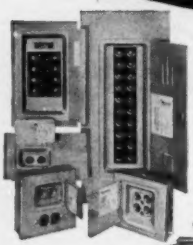
The General Line is the COMPLETE Line



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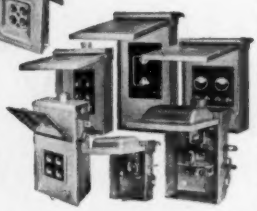

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WATCH THOSE BONUSES!

A lot of companies will be dishing out the ever - welcome annual bonuses during the next 60 days. Attorney Pearce, who knows a lot about the necessary red tape under the current emergency regulations, advises every employer to clear his plan of payment with the nearest wage-hour office before paying out, even if the plans have long been in effect. A list of these district offices appears on page 131.

products and services which he sells. Sometimes these are set on a formula basis, that is, margin over cost. The Office of Price Stabilization may be directed to disregard Bill's salary in computing cost. This might give him a ceiling price at which he could not afford to sell, or if he disregards this feature, he may slip into a violation of the federal price laws and regulations, which will call for still more penalties.

Jim believes, and will argue to you, that all he has done is to keep his small business going. Yet he has placed himself in considerable jeopardy. This is not good. Jim is not a bad actor, does not want to violate any laws, and he really shouldn't be in a fix like this.

Roy Clayton had a valuable employee who ought to have more money. Roy made a few inquiries and came to the conclusion that he was allowed to give a ten per cent increase, provided an increase of this amount had not been given during 1950. The trouble was that he had given this particular employee an increase in April, 1950, that amounted to almost ten per cent. Roy thought he had better lay his troubles before his nearest wage and hour office.

He was asked why he had given the increase and answered very promptly and truthfully that it was because this employee had been with him some time without a raise and his good work merited an increase in salary. He was then told that this was an individual increase under General Wage Regulation No. 5 and not a general increase under General Wage Regulation No. 6.

The result of this, it was explained, would entitle Roy to give

not only the general increase allowed by General Wage Regulation No. 6 but would also allow Roy to give this particular employee a further merit or length-of-service increase this year. He was also informed of an additional increase known as a "cost-of-living increase" (under General Wage Regulation No. 8). Roy, however, didn't need this last increase, at least for the time being, and he went away happy with the ruling that he could at this time pay the amount needed to keep this particular employee.

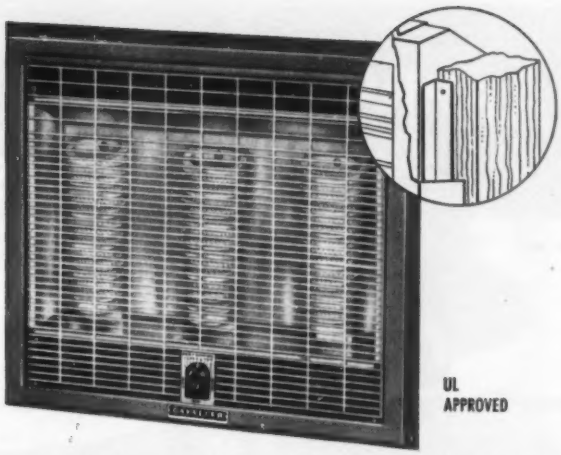
Roy Clayton now feels that you can do just about anything you wish under the regulations if you know how to do it. This, of course, is not strictly true.

Get commitment in writing

Roy had successfully met certain conditions and limitations in the regulations relating to past practices and average increases which might not be present in another case. Roy was right, however, in making inquiry into the regulations, which may disclose rights not generally understood from some report or news item concerning the regulations. And he was also wise in having the interpretation of the ruling reduced to writing in a letter for his records.

Another employer successfully solved a problem in another manner. He has a department which receives trade-in merchandise, repairs and reconditions it for the purpose of resale. During 1950 he had four employees in this department who did this work under the supervision of the general manager of the company. This year, however, the general manager was too busy with other matters to give this supervision. Instead, he has been relying on one of the four to determine what work was to be done on the merchandise, distribute the work around and inspect it when it was completed.

The facts in this matter justified the conclusion that this employee was promoted to a new and different job which required knowledge, skills, duties and responsibilities not present in the original job. Section 6 of General Wage Regulation 5 authorizes the creation of the new job and it was clear that changes in the job were not merely slight or inconsequential. Thus, fair and appropriate rates for the new job were estab-



UL APPROVED

EASY TO INSTALL

Cavalier WALL INSERT ELECTRIC HEATERS

Cavalier Electric Wall Heaters are built two inches lower than any other gravity type heater on the market . . . easier to fit in under windows and in tight spots. Nailing flanges on metal box fit between studs. Heater goes firmly, tightly in place fast. Frame extends 1½ inches to insure neat finished effect. All wiring easily accessible. Famous, trouble-free Wilcolator thermostat and control switch built into heater beneath double baffle, saves extra wiring. You save time on installation jobs with Cavalier.

. . . and for your customers:

• *3 MINUTE CLEANING*
Cavalier heaters can be cleaned inside and out in less than 3 minutes, without the necessity of moving a single screw.

• *QUIET*
No moving parts, noise or vibration. Yet Cavalier exclusive tapered cone construction* circulates ⅓ more heated air up through the element than any other gravity type heater.

• *SAFE*
Single thermostat switch cuts off both sides of circuit.

*PAT. APPLIED FOR

MADE IN FOUR SIZES: 1500 . . . 2000 . . . 3000 . . . 4000 WATT.

Sold through wholesalers only. PROMPT DELIVERIES. Write for facts and your distributor's name.

CAVALIER CORPORATION, Chattanooga 2, Tenn.

APPROVED FOR R.E.A. USE

No. 1261

SUSPENSION TYPE INSULATORS

Dead End	No. 1261, 6" dia.
Ball and Socket	No. 1253, 10" dia.
Clevis Type	No. 1270, 7½" dia.
	No. 1271, 10" dia.

REINFORCED WIREHOLDER INSULATORS

Reinforced Type	No. 1937 2¼" Screw
Reinforced Type	No. 1937-3 3" Screw

No. 1937

No. 101

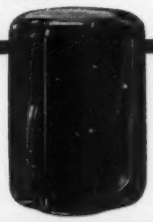
SPOOL TYPE INSULATORS

Secondary Rack	No. 101, 1¾" dia. Groove
Secondary Rack	No. 96, 3" dia. Groove
Service Rack	No. 100, 1⅜" dia. Groove

GUY STRAIN INSULATORS

No. 502, No. 534, No. 536, No. 538, No. 540 — Use dependent upon strength and cable requirements

No. 502



No. 175

PIN TYPE INSULATORS

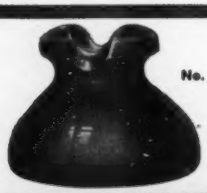
One Piece Pin Type

No. 135 No. 175 No. 253
No. 261 No. 266

Multi-Part Pin Type

No. 2027 No. 2045 No. 2055

No. 261



DEAD END CLAMPS, SUSPENSION CLAMPS AND FITTINGS

Write for Complete Information and Prices

ILLINOIS ELECTRIC PORCELAIN CO.
MACOMB, ILLINOIS

lished under General Wage Regulation 5 and the employee was allowed to receive the additional compensation.

They aren't that soft

If these illustrations suggest that the wage and hour offices are engaged in finding excuses for paying higher wages or that they can in every instance show the employer how to accomplish what he wants to do, the illustrations are misleading. The regulations are carefully written and do impose definite limitations which may not be exceeded. It is fair to say, though, that these wage and hour offices and the specialists employed by these offices have a sincere desire to see that you thoroughly understand the regulations as they apply to your business and your problems and, as far as possible, to assist you in solving your problems properly under the regulations. The Atlanta, Georgia, office, for example, serves a very large and important area. The personnel in that office will do anything within reason to assist any employer in understanding and applying the regulations as they affect his business and so far as possible under the regulations to help him solve his problems in the way he wants to solve them. There are similar offices scattered throughout the country, as shown in the list on page 78.

The greatest single type of error that misleads most employers is failure to know what a "general increase" actually is. General increases are permitted by General Wage Regulation No. 6 (or General Salary Stabilization Regulation No. 1). However, the right to give such general increase may be diminished or even removed by general increases given during the year 1950. Many employers, however, are considering increases as general increases which actually are individual increases of the type covered by General Wage Regulation No. 5 and by making this mistake unnecessarily limit their ability now to make appropriate increases which they wish to do.

Just because a particular employee received an increase of, say, ten per cent, during 1950, does not necessarily mean that such employee may not participate in the general increase allowed by General Wage Regula-

tion No. 6. In order to determine this, the employer must first establish in his thinking the reason for giving this particular increase. Was it given to reward merit in this employee? Was it given because of length of service in this employee? Was it a promotion to a higher job? If so, it was an individual increase under G.W.R. 5. If it was an individual increase, this may prove of considerable benefit to the employer, as it did in the case of Roy Clayton. It not only does not stand in the way of a general increase but may also set a practice which would allow a merit or length-of-service increase to be given now in addition to the general increase.

It is important to know that the type of increase is not determined by the number of employees to whom it was given. Thus it was possible for individual increases to have been given during 1950 to all employees in a group and it is possible that an increase was a general increase although not given to all employees in a group or not given in the same amounts or percentages to all employees. The controlling factor is the purpose for which it was given.

What type of increase?

The best suggestion that can be given for approaching this problem is first see if the increase was any one of the types of individual increases described in General Wage Regulation No. 5 (length of service, merit, promotion, etc.) If it was not one of these types of increases, then it must necessarily be a general increase under G.W.R. No. 6. In other words, an increase that doesn't qualify as individual under No. 5 would have to be considered a general increase under No. 6. It is of paramount importance, therefore, that you know the circumstances under which you gave the increase in 1950, and your intent in giving such increase.

Carl Black was typical of many employers in this area in that his business was not large, he had no formalized personnel department with job classifications, rate ranges and other similar things found in larger industrial plants. He was having considerable trouble reading and understanding G.W.R. No. 5, and it was a great help to him when he found that he could disregard subparagraph (a) of Section 2, which covered several printed pages, and need-

Geometric Lighting Patterns-
Unlimited!
Compco
UNIVERSAL
PATTERN LIGHTING
ONLY 4 BASIC UNITS
by Compco form *any* geometric lighting pattern desired . . . patterns custom-styled exactly to the client's needs . . . patterns far more attractive and efficient than ordinary continuous-row fixtures—yet just as easy to install! Compco fixtures assure lowest maintenance, too. They have all-steel housings and louvers, durably finished in Compco's exclusive baked-on "Glazenamel." For unlimited design and longest life, investigate Compco Pattern Lighting!
Compco Corporation,
2251 W. St. Paul Ave.,
Chicago 47, Ill.
WRITE FOR FREE BULLETIN
showing design suggestions and construction, application, and installation data.

ed to concern himself only with subparagraph (b) of Section 2, which covered less than a page. This subsection, besides being easier to read and apply, may actually be more favorable for his use than the "rate range" subsection.

One small establishment was concerned with only one employee and had a problem simple of solution, although it may easily be overlooked. All of the increases otherwise permitted by the regulations were not sufficient in this instance. However, because of increased business and the difficulty in obtaining help, this employee was working more hours per week than he was in 1950. His compensation, however, had been computed on the basis of so much per week for 40 hours' work.

He couldn't pay overtime

In a large industrial plant this would automatically be taken care of by straight time and overtime payments, but it had been unnoticed in this particular establishment. The owner learned that while he could not pay overtime in the absence of previous practice, he could increase the compensation of this employee on a straight-time basis commensurate with the additional hours now being worked. It solved the problem in this instance.

Something ought to be said about the people who write and administer these regulations. Unquestionably, some gobbledygook has come out of Washington, some of it very strange indeed. However, it is a definite fact that the people who write these regulations we are discussing strive in every way to make them simple, clear and understandable to the businessman. What we lose sight of is the fact that these regulations are also laws of the United States and have to be written with sufficient preciseness and definiteness so that they will be enforceable if the need arises. Otherwise, as laws they will be no good.

The government does not want you to violate these regulations. The government will help you in every way possible to understand them, apply them to your own particular problems, and take advantage of every provision in the regulations which may help you do what you want to do in the way you want to do it.

Here are the locations of wage-hour offices

FOR INTERPRETATIONS of wage, salary and bonus regulations, contact your nearest field office of the Wage and Hour Administration. In the South they are:

Delaware and **Maryland**—406 Old Town Bank Building, Fallsway and Gay Streets, **Baltimore** 2, Md.

Alabama, Florida, Georgia, Mississippi, North Carolina and **South Carolina**—4th Floor Title Building, 15 Auburn Avenue, S.E., **Atlanta, Ga.**; 1401 Hampton Street, **Columbia** 1, S. C.; 425½ S. State Street, **Jackson** 8, Miss.; 456 New Post Office Building, **Jacksonville** 1, Fla.; 715 Dade-Commonwealth Building, 139 N.E. First Street, **Miami**, Fla.; 445-447 U. S. Court House and Custom House Building, **Mobile**, Ala., and Room 207, Industrial Building, 35 Bull Street, **Savannah**, Ga.

Kansas and **Missouri**—3000 Federal Office Building, 911 Walnut Street, **Kansas City** 6, Mo.; 2nd Floor, 1102 East Douglas Street, **Wichita**, Kan., and 324 Old Custom House, 815 Olive Street, **St. Louis** 1, Mo.

Arkansas, Louisiana, New Mexico, Oklahoma and **Texas**—413 U. S. Court House Annex, Fifth and Gold Streets, **Albuquerque**, N. M.; 420 Fidelity Building, 1000 Main Street, **Dallas**, Texas; 516 Banner Building, 221 N. Mesa Avenue, **El Paso**, Texas; 1109 Burk Burnett Building, 502 Main Street, **Fort Worth**, Texas; 210 East Harrison Street, **Harlingen**, Texas; 703 Federal Office Building, **Houston** 14, Texas; 203 Reed Music Co. Building, 112½ East 7th Street, **Little Rock**, Ark.; 1723 Masonic Temple Building, **New Orleans** 12, La.; 508 Oklahoma Natural Building, 3rd and Harvey Streets, **Oklahoma City** 2, Okla.; James K. Building, 417 South Main Avenue, **San Antonio**, Texas, and Medical Arts Building, 624 Travis Street, **Shreveport**, La.

Kentucky, Tennessee, Virginia and **West Virginia**—321 Embleton Building, 922 Quarrier Street, **Charleston**, W. Va.; Fidelity Bankers Trust Co. Building, 502 South Gay Street, **Knoxville**, Tenn.; 1008 Columbia Building, 401 W. Main Street, **Louisville** 2, Ky.; 715 M and M Building, 198 South Main Street, **Memphis**, Tenn.; Presbyterian Building, 152-154 4th Avenue North, **Nashville** 3, Tenn.; 205 West Grace Street, **Richmond** 19, Va., and 2nd Floor, 25½ West Church Avenue, **Roanoke**, Va.

District of Columbia—Room 1513, Tempo V, **Washington**, D. C.

NEMA releases maintenance booklet

◆ THE RENEWAL Parts Section of the National Electrical Manufacturers Association has published a booklet entitled "Protective

YOU CAN DEPEND ON THE TWO LABELS

MULTI

ON INDUSTRIAL LIGHTING FIXTURES

MULTI RLM ELECTRICAL TESTING LABORATORIES, INC.

THE "FLUORAINE" MEETS RLM SPECIFICATIONS FOR 2 OR 3 LITE 40 WATT LAMPS

RLM SOCKET REFLECTOR

Send for Your Complete Catalog No. 25

MULTI ELECTRIC MFG. INC.

4223 W. LAKE ST. CHICAGO 24

Maintenance of Motors and Generators."

The booklet is designed for maintenance men as a reference for everyday maintenance problems common to electrical rotating machines.

An appendix has been added, containing NEMA Standards for Classification of Coils, Insulating Materials, Replacement Commutators and Assembled Segments, Authorized Engineering Information on Armature Winding Supplies, and Definitions for Renewal Parts proposed by the Renewal Parts Section.

Dates Ahead

Southeastern Electric Exchange, Engineering and Operations Section, Hotel John Marshall, Richmond, Va., October 4-5, 1951.

National Hardware Show, Grand Central Palace, New York, N. Y., October 8-12, 1951.

National Farm Electrification Conference, Hotel Gibson, Cincinnati, Ohio, October 9-10, 1951.

National Electrical Contractors Association, 50th Anniversary Meeting, Hotel Shoreham, Washington, D. C., October 9-12, 1951.

International Association of Electrical Leagues, 16th Annual Conference, Roosevelt Hotel, New Orleans, La., October 10-13, 1951.

Southeastern Electric Exchange, Accounting Section, Hotel Sir Walter, Raleigh, N. C., October 11-12, 1951.

International Association of Electrical Inspectors, Southern Section, 23rd Annual Meeting, Hotel John Marshall, Richmond, Va., October 15-17, 1951.

National Association of Corrosion Engineers, South Central Region, Corpus Christi, Texas, October 18-20, 1951.

American Institute of Electrical Engineers, Fall General Meeting, Hotel Cleveland, Cleveland, Ohio, October 22-26, 1951.

Southeastern Electric Exchange, Sales Section, Roosevelt Hotel, New Orleans, La., October 31-November 2, 1951.

Occupational Vision Short Course, sponsored by LSU College of Engineering and Extension Division, Baton Rouge, La., November 4-6, 1951.

National Electrical Manufacturers Association, Chalfonte-Haddon Hall, Atlantic City, N. J., November 12-15, 1951.

*Asterisk indicates meetings announced for the first time in this column.

More and More BUILDERS and CONTRACTORS PROFIT WITH ELECTROMODE

Automatic Temperature Control

Easy to Install

Built-in Safety Switch

Deliver Today-Heat Tomorrow

Assures Customer Satisfaction

MODEL WA

ELECTROMODE GIVES YOU ALL THESE BENEFITS

- Patented, Cast Aluminum Lifetime Heating Element has no exposed wires . . . no danger of fire, shock or burn.
- 100% Automatic Cut-Off Safety Switch prevents overheating.
- Exclusive Down-Flo Heating provides maximum heat distribution from floor to ceiling and eliminates wall smudge.
- Quiet, Long-Life Motor gives silent operation. Never needs oiling.
- Built-in Thermostat maintains any desired room temperature from 55° to 85°.
- Attractive Silver-Grey Finish blends with home furnishings.
- Approved by Underwriters' Laboratories and Canadian Standards Association.

Available in 1500, 2000, 3000, 4000 watts for 240 volt service. Also 1500 watts for 120 volt service. Front plate: 17" wide, 21" high. Extends 1" from wall. Wall box is 4¼" deep and fits between standard wall studding.

MODEL WJA

Automatic WALL-TYPE BATHROOM HEATER

Perfect for bathroom or any small room. Has all the safety features shown above. Available in white or chrome finish, automatic or non-automatic. 1320 watts, 110 volts, 4508 B.T.U. Front plate: 11½" high, 12⅞" wide. Extends 2" from wall. Wall box 3¾" deep, fits standard wall construction.

Electromode makes a full line of wall and portable fan-circulating heaters for home, industry, business and farm. Available through leading electric wholesalers.

ELECTROMODE All-Electric HEATERS

Write for FREE CATALOGS

Full of specifications, installations, and how to figure and install Electromode heaters.

ELECTROMODE CORPORATION, DEPT. ES-101

45 CROUCH STREET, ROCHESTER 3, N. Y.

NAME _____

TITLE _____

ADDRESS _____

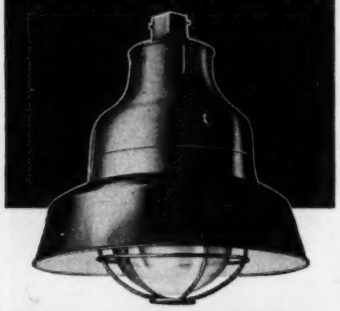
YOUR WHOLESALER _____

Rely on Quality—

PYLE-NATIONAL INDUSTRIAL LIGHTING FIXTURES

for safety

IN HAZARDOUS LOCATIONS



EXPLOSION PROOF

Pyle-National LE Series: Class I, C and D

For use in locations where highly flammable materials are manufactured or handled.

Rugged, flame-tight cast aluminum alloy housings render internal explosions harmless, and insure safe operating temperatures. Threaded construction permits easy access to interior for wiring and lamp replacement. Available in many types and sizes.

DUST-TIGHT

Pyle-National DE Series: **Class II, Groups, E, F and G**

For use in locations where flammable dusts are present in quantity.

Strong, one-piece cast aluminum alloy housings are designed to exclude dust from the interior and to avoid accumulation of dust on the exterior surface. Available in many types and sizes.

Consult the new PYLET Catalog for complete line of explosion-proof supporting PYLETS for lighting fixture mounting.

THE PYLE-NATIONAL COMPANY

1354 N. KOSTNER AVENUE CHICAGO 51, ILLINOIS

District Offices and Representatives in Principal Cities of the United States.

Plugs and Receptacles · Floodlights · Conduit Fittings

NAMES IN THE NEWS

J. A. Morse has been appointed operating manager for the Southern District of **Rome Cable Corp.**, according to an announcement by **C. J. McMurry**, district manager, with headquarters in Atlanta at 156 Simpson St., N. W.

The Southern District comprises the eight states, Virginia and south. The appointment of Mr. Morse has been occasioned by the promotion of **W. A. Miller**, who has been covering the northern portion of the district, to be district manager at Philadelphia.

R. T. Edwards, who has been covering Alabama, most of Tennessee and Mississippi, is being transferred to Richmond to cover the Northern portion.

F. D. Rucker, who has been operating manager, has been appointed sales representative to cover that portion of the district formerly covered by Mr. Edwards.

There has been no change in the responsibilities of **C. R. Stegin**, who covers Florida and part of Georgia as well as Charleston, S. C.

•

Alfred Parone, district manager of **Arrow-Hart & Hegeman Electric Co.**, announces the opening of a new branch, located at 172 Simpson St., N. W., Atlanta.

The Atlanta branch will carry a complete stock of electrical motor-starting equipment and will serve Georgia, Florida, Alabama, and Tennessee. **W. L. Morrell, Jr.**, will be the branch supervisor in this new office. Mr. Morrell has been with the company for a year in sales and sales promotion work.

Arrow-Hart & Hegeman Electric Co. has within the past 30 days opened a similar branch located at 813 W. Trade St., in Charlotte, N. C. This Charlotte office is under the supervision of **Richard Messinger.**

•

S. T. Walz, Southeastern regional manager for **Square D Co.**, with district office headquarters at 1122 W. Peachtree St., N. W., Atlanta, has announced the appointment of three new men for the region.

New Charlotte district manager is **R. C. Quick**, who replaces **Sam Hartness**, transferred to the Chicago office. Mr. Quick was previously in charge of the Square D office in Saginaw, Mich.

R. M. Ferguson is an addition to the Charlotte sales force as field engineer. Mr. Ferguson recently completed a training course at Square D's Detroit and Milwaukee factories.

K. D. Hightower is a new field engineer for the company's sales force in Jacksonville, Fla. Mr. Hightower recently completed the company field engineer training course, and will replace **T. C. Chitty**, who was called to active duty by the Navy.

•

Several appointments have been announced recently by executives of the **Louisiana Power & Light Co.**

C. N. Olivier, division manager, has announced that **J. M. Wyatt**, sales manager for the company's north Louisiana service area, has been appointed assistant division manager for the West Bank division.

Mr. Wyatt, who is being replaced by **E. A. Hodge** of the general office sales staff, assumed his new duties in Gretna

Alfred Parone *W. L. Morrell, Jr.*

in September. Mr. Hodge was formerly rural service consultant in the company's sales organization.

C. L. Osterberger, general sales manager, announced that **Gerald McLendon** is new rural service consultant. Mr. McLendon has been sales representative in Ferriday, and he will now be attached to the general office sales staff in New Orleans. He replaces E. A. Hodge.

•

Karl R. Koerper has been elected a vice-president of **Kansas City Power & Light Co.** He will fill the vacancy created by the recent resignation of **Joseph F. Porter, Jr.**

Karl R. Koerper

Mr. Koerper was formerly vice-president and managing director of Midland Broadcasting Co., of Kansas City.

All of the sales and commercial activities of Kansas City Power & Light Co., as well as the advertising and publicity department, will be under Mr. Koerper's general direction, according to **H. B. Munsell**, president.

•

A. Waitzkin, Globe Lighting Products, Inc., Brooklyn and Los Angeles, has announced that **A. M. Orlick**, who has covered the Southeast and Southwest territory since 1935, and is well known to the electrical wholesaler trade, has been appointed by Globe to cover the same territory with their lines of residential, commercial, and industrial lighting equipment.

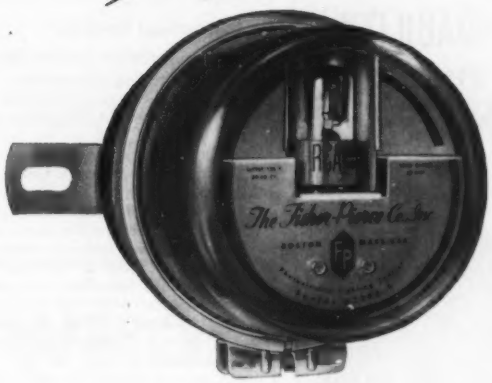
•

Vincent P. Oatis, Jr., has been appointed sales engineer in charge of underfloor wiring systems for **National Electric Products Corp.**, Pittsburgh, Pa.

In making known this appointment, **R. C. Bennett, Jr.**, vice-president and sales manager, stated that in his new capacity Mr. Oatis will assist all National Electric representatives in sales development of the company's underfloor wiring systems. He will also assist in an educational program among architects, engineers, and electrical contractors.

Mr. Oatis was formerly with I. A. Bennett & Co., Chicago.

Improved....



Series 63300 B

FISHER - PIERCE

PHOTOELECTRIC CONTROL

FOR STREET LIGHTING

This new Fisher-Pierce Control is the result of long experience in design and manufacture, combined with practical experience of more than 600 electric utilities in more than 20,000 installations.

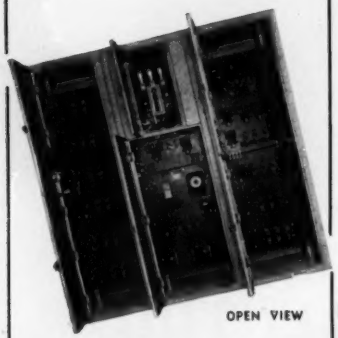
The new 63300 B Control is mechanically and electrically interchangeable with existing controls. The same dependable Fisher-Pierce circuit, consistently giving tube life of more than 20,000 hours, has been retained. Improved spacing and insulation provides increased protection against lightning damage . . . up to 2500 volts rms Hipot. Mechanical design has been altered to provide maximum simplicity for greater economy of servicing.

FP

The FISHER-PIERCE Co., Inc.

59 PEARL STREET, SO. BRAINTREE, BOSTON 85, MASS.

Get *Extra years*
of
DEPENDABILITY
WITH
MONITOR



OPEN VIEW

200 H. P. - FULLY AUTOMATIC COMPRESSOR CONTROLLER for AIR CONDITIONING SYSTEM

CLOSED VIEW

The performance records of MONITOR Controls are truly outstanding! It is an actual fact that many MONITOR units have been in constant operation *longer* than some motor control manufacturers have been in business!

Truly, a good installation deserves MONITOR Control!

The MONITOR CONTROLLER CO.
Braintree 84, Mass.

REPRESENTED BY

B. S. WOODMAN
1570 Northside Ave.
Atlanta, Georgia

L. L. ROUSSEL
312 E. Livingston Pl.
New Orleans, La.

LYNN ELLIOTT CO.
322 M & M Building
Houston 2, Texas

NEW PRODUCT NEWS

Instrument booklet

INFORMATION ON "how to select" electrical measuring instruments is provided in a 30-page instrument booklet available from the Westinghouse Electric Corp.

Seven basic selection factors are explained; types of instruments available in each major classification are listed on a full-page check chart; and, four typical selection problems are solved to help the reader make his selection.

Complete lines of portable, switchboard, panel, recording, and socket instruments are described and illustrated, and functions of each are explained. Descriptions of instrument auxiliaries are included.

A copy of booklet B-4696 is available from Westinghouse Electric Corp., Box 2099, Pittsburgh 30, Pa.

●

Incandescent lamp

INTRODUCTION of a 60-watt incandescent "white" lamp has been announced by General Electric's lamp division at Nela Park, Cleveland, Ohio.

The new lamp, containing an inside "Q" coating that spreads the light evenly over the entire surface of the bulb, is the fourth in a line of "white" lamps to be introduced by G. E. Others are the 100-watt size, the 50-100-150-watt "R-40 Indirect White" bulb, and the 100-200-300-watt "three-lite" bulb.

The new coating is composed of a silicon compound that gives near-perfect diffusion. Benefits of lamps with the new coating are that they cast soft shadows, lessen reflected glare, diffuse the light evenly, and have a white, clean appearance, according to G. E.

These advantages are said to be provided without appreciable loss in the amount of light produced. The "white" 60-watt lamp is now becoming available in retail outlets on a national basis. List price is 19 cents, excluding federal tax.

●

New motor line

THE Hoover Co. has recently announced the introduction of a new line of NEMA "C" face-mounted, integral hp motors.

Built in standard NEMA frames, these units are offered in single-phase, integral hp ratings through 3 hp, 3450 rpm, and in polyphase, integral hp ratings through 5 hp, 3450 rpm.

Two basic varieties are available: horizontal, and vertical, similar to the horizontal except without a mounting base but equipped with a canopy.

Both varieties are dripproof, equipped with heavy-duty ball bearings and suitable for continuous-duty operation on applications such as water pumps, sewage pumps, machine tools where vertical operation is required, and any other general-purpose application suitable to face-mounted motors.

Special features of this line include, on the single-phase units, a totally enclosed dust-proof, dirt-proof external switch housing which prevents foreign matter from lodging between the contacting points and causing trouble; and also condensers mounted within the motor base to minimize in-transit and handling damage.

●

New Glatthar fixtures

TWELVE NEW residential lighting fixtures for 1952 have been added to the line manufactured by Glatthar Lighting Co., 949 E. 72nd St., Cleveland 3, Ohio.

Included in the fixtures is a polka-dot crimped-edge two-light bedroom unit, No. 1539, 12 inches in size, available in white, blue, rose, or green. Also announced is a square kitchen unit, Nos. 1540 (8-inch), and 1541 (10-inch).

A full-color supplement sheet to the Glatthar catalog, describing these new fixtures, is available for imprinting.

●

Fluorescent catalog

A NEW 24-PAGE catalog, No. 53, "Naturlite Lighting," has been announced as available from Light and Power Utilities Corp., 1035 Firestone Blvd., Memphis, Tenn.

The catalog is illustrated with typical installations, coefficients of utilization for many of the fixtures, specifications, and cross-sectional views of various styles.

Light and Power also announced a four-page mailer, "Planned Classroom Lighting," which describes the company's school-lighting fixture, the Peabody, which is listed by Underwriters' Laboratories. Both the catalog and the mailer are two-color.

●

Dust-tight fixtures

A NEW LINE of Type DL dust-tight lighting fixtures has been announced by Russell & Stoll Co., Inc. The fixtures are designed to provide safe and efficient illumination for hazardous locations where flammable or explosive dusts are present: specifically, Class II, Groups E, F, G, and Class III.

Two exclusive fixture design features simplify installations, cleaning, and relamping maintenance. The features are:

(1) Lampholders are located within the conduit box assembly of both pendent and junction box types, permitting installation and wiring without regard to size or style of fixture.

(2) All fixture-globe-reflector assemblies fit either base and are easily attached or interchanged by means of

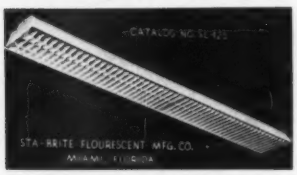
a simple bayonet slot and screw arrangement, without disturbing electrical connections.

Complete interchangeability is provided in this line, which is described in Data Sheet No. 7151-11, available from Russell & Stoll Co., Inc., 125 Barclay St., New York 7, N. Y.

•

School-lighting fixture

A NEW SCHOOL-LIGHTING fixture, Schoolite, has been developed by Sta-Brite Fluorescent Mfg. Co., 325 N. W. 22nd Lane, Miami 37, Fla., after extensive study of the needs and requirements of school and office lighting.



According to the manufacturer, this fixture has been approved and used extensively throughout Florida schools. It can be installed individually or end-to-end for continuous runs, either pendent or surface mounting.

The unit is constructed of heavy-gauge die-formed metal, treated to prevent rusting by spraying with Sta-Brite chip-proof ETL-tested enamel and oven-baked at 300 degrees.

For simple maintenance, the fixture can be relamped from top or bottom, as the louver is hinged in two sections.

The new fixture is also available with louver approximately 45 degrees 25 degrees cut-off.

The unit has been listed by Underwriters' Laboratories.

•

Reflector equipment

THE Benjamin "Turnlox" detachable reflector, manufactured by Benjamin Elec. Mfg. Co., Des Plaines, Ill., permits the removal of reflector and lamp as one unit for easy cleaning on the ground or at a bench.

The detachable reflector permits quick and easy removal of reflector and lamp (also globe where supplied) from the hood containing the wiring terminal base. All that is necessary is a slight upward pressure on the reflector rim and less than a quarter turn to the right.

A sturdy three-point bayonet coupling between the hood and reflector is the key to the design. Electrical and mechanical connections are joined simultaneously with the engagement of the bayonet lock. Automatic polarization is provided.

The hoods have easily wired porcelain terminal bases which fit any medium base or mogul base "Turnlox" reflector assembly. A complete line of heavy-duty, porcelain-enameled steel reflectors is available in "Turnlox" construction.

Available lampholder assemblies include keyless rigid, pull chain—shock-absorbing, and self-locking types.

•

Construction catalog

A NEW comprehensive fully illustrated 78-page construction catalog has just been issued by Unistrut Products Co., 1013 W. Washington Blvd., Chicago.

Catalog 700 is a simple, easy-to-use manual on how to frame, hang, mount, and support many kinds of mechanical and electrical equipment with Unistrut all-purpose metal framing. It is packed with pictures and detailed data on product and applications.

Catalog 700 is available without charge upon request to Unistrut.

•

Ground wires clip

THE James R. Kearney Corp. has begun production of a new type of clip used to secure ground wires to poles on electric power lines.

These clips, approved for rural use,

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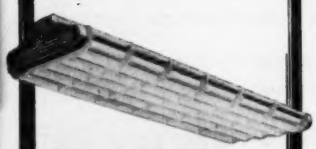
Yes, it's hard to believe that lighting fixtures play such an important and colorful role in home, office and store decoration, but they do. In Kayline's big 64 page, illustrated Catalogue #50 you'll find lighting fixtures styled for every type room, every type lighting need. For incandescent, fluorescent and slimline lighting fixtures choose from Kayline's Catalogue #50. Write for it today on your business letterhead.

See Sweet's Architectural File Section 31A-12



THE KAYLINE COMPANY
2480 EAST 22nd STREET
CLEVELAND 15, OHIO

KAYLINE
the one source lighting line

prevent radio interference commonly associated with the use of ordinary staples by eliminating the spark gaps between clip and wire.

This is made possible by designing the clip so that its contact pressure with the wire is independent of its hold in the pole. The pressure remains constant even if years of exposure to weather cause it to loosen in the wood.

The clip is first driven part-way into the pole with a hammer, and then the ground wire is slipped under a hook which projects from the body. A few more hammer blows finish the operation by causing the hook to grip the wire and the end of the clip to bend over and bite into the pole.

Further information is available in bulletin 16-12 from James R. Kearney Corp., 4236 Clayton Ave., St. Louis 10, Mo.

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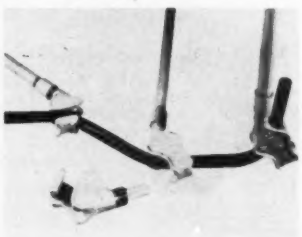
Pipe bender

A NEW BENDING TOOL that can be used in six different directions has been developed by Tal Bender, Inc., Milwaukee 2, Wis.



The Tal 6-Way Hickey with its six no-slip bending jaws was designed for making bends, elbows, sets, offsets, loops, saddles, and stubs on open or slab work and in close quarters.

The stub hole is a new feature devised for bending or straightening conduit protruding from concrete floors or walls. The long safety neck extends into the pipe handle, making this tool danger-proof against accidents caused by the pipe handle breaking.

The jaws are another added safety feature against the hazard of the pipe slipping during the bending operations.

Price is $6.90, FOB, Milwaukee.

•

Protective lighting equipment

LINE MATERIAL Co., Milwaukee 1, Wis., has announced an improved line of protective lighting equipment. Two luminaires, the Spherolite and Fresnelite, offer a variety of light patterns which will, in most cases, adequately cover the complete requirements of all protective lighting installations.

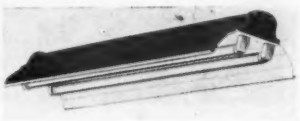
The L-M Spherolite provides IES light patterns, Type I through Type V, and is designed for use with incandescent lamps up to 575 watts on multiple circuits or 10,000 lumens on series circuits. With no basic changes or additions it will accommodate 11,000, 15,000, or 20,000 lumen vertical position mercury vapor lamps.

The L-M Fresnelite, which projects a wide, flat beam of light for a considerable distance, was specifically designed for glare lighting of outer fence areas. In application, it is mounted inside the fence boundary and projects a bright beam just outside the fence.

•

Industrial fixture

THE Metalcraft Products Co., Inc., Mascher & Lippincott Sts., Philadelphia 33, Pa., has recently introduced, as a new addition to its line, an industrial unit of the 40-watt, two-lamp fluorescent type.



The new Magna-Lite fixture, the "Samson," has been engineered for rugged construction. Built of heavy-gauge steel, each unit is die-formed to insure completely uniform construction.

Choice of reflectors in porcelain enamel or baked-enamel finish is offered, and the makers state that both are designed for maximum light output. They are a full 12 inches wide by 3½ inches deep.

The new units are easy to install and maintain. The reflectors are attached to the chassis with two "Shakeproof" one-quarter-turn wing fasteners which afford easy removal for cleaning or for access to wiring. Either chain or stem hanging is provided for. Starters are of the remote type.

•

Fluorescent line catalog

THE "Dynalite" line of 82 job-rated industrial fluorescent units is described in a new two-color catalog, No. 438, just published by the commercial and industrial fluorescent fixtures division of the Mitchell Mfg. Co., 2525 No. Clybourn Ave., Chicago 14, Ill.

The catalog offers complete specifications for all models as well as dimensional diagrams, tables of coefficients of utilization, and distribution curves. Also included are descriptions and pictures of all accessories available for the "Dynalite" line.

•

Industrial reflector

THE Abolite Lighting Division of The Jones Metal Products Co. has announced a new Protecto reflector known as the GBF unit for a wide variety of industrial and commercial applications.

The new reflector is similar to the Abolite deep bowl reflector, but differs in size and contour. It has specific uses in machine shops, assembly lines, work benches, shipping and receiving departments, factories, print shops, warehouses, and power plants.

The reflector was designed in co-operation with General Electric lighting engineers to be used with the new G. E. high-bay lamp R-52 bulb. Reflector and neck are one-piece construction and seven mounting styles are available for installation requirements.

The reflector is made of lifetime porcelain enamel on steel with a standard outside green finish and the popular whiter-than-white porcelain enamel inside reflector.

More detailed information is available from the Abolite Lighting Division of The Jones Metal Products Co., W. Lafayette, Ohio.

•

Protective lighting booklet

COMPLETE PLANS for outdoor industrial lighting are provided in a new 24-page booklet, Light for Plant Safety and Security, available from Westinghouse.

Stressing that protective lighting is good productive lighting, the booklet sets forth four principles:

(1) discourage attempts at entry; (2) make detection certain if entry is attempted; (3) aid the guard and hinder the intruder; and (4) provide complete reliability.

Application suggestions and techniques are given, such as the lighting of isolated fence boundaries, building-face boundaries, water-front boundaries, and industrial thoroughfares. Various power distribution and control systems and mounting methods are provided.

A copy of booklet B-4791 is available from the Westinghouse Electric Corp., Box 2099, Pittsburgh 30, Pa.

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Store lighting

(Continued from page 52)

add emphasis to the display value of the jewelry. The center chandelier is primarily for decoration.

(4) Here again fluorescent and incandescent were combined in individual recessed fixtures to give approximately 30 foot-candles. The projecting wall element uses 40-watt fluorescent lamps to give 60-80 foot-candles.

Customers entering this department invariably go to the right as this bright area attracts their attention to the merchandise. The two-40-watt fluorescent fixtures make a ceiling pattern and are placed parallel to the column face.

The 300-watt louvered incandescent fixtures are generally equally spaced, but one is located

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ARE SAFE — No explosion or fire hazards. No fire proof vaults. Class B and C heat proof insulations.

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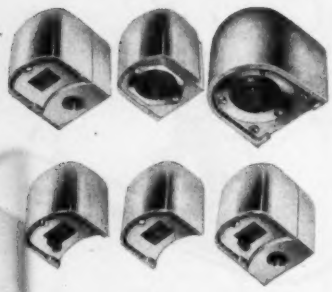
They're Weather-proof

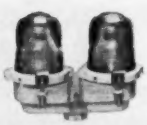


Just the thing the Electrical World has been waiting for! Install them on flat or round surfaces—they provide a convenient outlet for plugging in portable electric tools or controlling light circuits.

WHITE-WAY PYLON-LITES for Street Lighting

Full Line of Incandescent & Mercury Luminaires Including One-Piece Hexagon Standards

Latest C-1 High Intensity Runway Marker



Obstruction Lights
Sports Floods

Write for Data

REVERE ELECTRIC MFG. CO.

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LIGHTING EQUIPMENT FOR EVERY NEED

so as to fill in between the fluorescent units and along the curved sections of the wall.

(5) Here an expectant mother can shop in comfort and with good vision produced by 40 foot-candles of illumination. The artificial skylight using six 40-watt fluorescent lamps are combined with 300-watt incandescent recessed units to give a good quality of merchandising light.

The wall case shelves and top are made of glass through which the fluorescent lamps can illuminate the merchandise and also the mural on the side walls.

(6) This is the entrance to the shoe salon using 300-watt recessed louvered fixtures to give 20 foot-candles. Properly illuminated wall niches make the shoes on display appear as though they were floating in the air.

Checker-board arrangement is obtained by using plain and antique mirrors in alternating sections with the illuminated niches. The niche lighting is produced by use of 14-watt fluorescent lamps giving 50 foot-candles of light on the shoes.

Classroom lighting

(Continued from page 41)

lend their support whenever and wherever possible.

Many ways to educate

There are many ways in which the Better Light-Better Sight story may be promoted:

(1) By direct contact through personal calls on individual educators.

(2) Holding group meetings with school boards and parent teachers associations.

(3) Arranging for school administrators to visit one of the major lamp companies' lighting clinics.

(4) Inviting educators to attend Illuminating Engineering Society meetings, where chapters are represented.

(5) Sending direct mail pieces on school lighting to school and civic officials at least once each year.

(6) Conducting local lighting schools with electrical contractors so they may get the facts. (There may not be an illuminating engineer in every rural area, but there is always an electrical contractor ready to serve the community.)

(7) A trial installation for demonstration may be installed in one classroom through the cooperation of the utility company and an equipment manufacturer.

(8) A maintenance course on fluorescent lighting can be held for school building engineers and custodians.

No matter how the approach is made to this problem of education, it must be done sincerely with an enthusiastic conviction and must be continually pursued.

The story that must be told and sold to the educators is the sight-light story—the fact that seeing involves more than just having good eyesight—that proper lighting can and does aid in reducing eyestrain and eye fatigue in the classroom.

Through the science of seeing developed in recent years by Dr. Matthew Luckiesh and Frank K. Moss, we learn certain facts concerned with eyes and the way people use them.

In general, the process of seeing depends on four primary factors:

(1) The size of the object;

(2) The contrast between the object and its background;

(3) The time available for seeing; and

(4) The brightness of the object.

In classroom work, the size of the object is the fixed factor of the seeing task. The other three factors are variable and may be improved by providing adequate high levels of glare-free illumination for the students. The ability to see clearly in a minimum of time increases rapidly as the values in illumination increases from 0 to 50 ft-c.

Glare, which is caused by overbright sources appearing in the line of vision, retards the ability to see easily and clearly.

This fact is probably shown best in the old illustration of driving an automobile on a dark highway at night. You can see quite well by the light of your own headlights until another car approaches from the opposite di-

rection. The glare from the approaching headlights makes seeing very difficult.

While this is an extreme example, any source of glare in a classroom has the same effect. Reducing the glare factor in a classroom will result in less eyestrain on the part of the students.

Studies on the relation of light to vision also indicate that not only does a well-balanced lighting system aid normal eyes, but is even more beneficial to defective vision.

This has been proved to such a conclusion that high levels of glare-free illumination are always provided in sight-saving classrooms where children with pronounced visual defects are grouped together for study.

A booklet recently published by the National Society for the Prevention of Blindness entitled "Classroom Lighting" indicates that the value of proper lighting for seeing is being acclaimed by others outside of the electric industry.

Another booklet has been published by the educational division of the Better Business Bureau entitled "Facts You Should Know About Your Eyesight." In this 15-page pamphlet, three pages have been devoted to the effect of lighting on the eyes.

Both of these booklets are available for a slight charge per copy.

Perhaps the great humanitarian aspect of preserving the eyesight of our youth might not appeal to some people. They might be more interested in the saving of taxpayers' dollars, through reducing the number of repeat students taking a course.

In other words, good lighting improves scholarship. Many experiments have been made, with the results indicating that good seeing conditions in the classrooms will improve scholarship.

The psychological advantages of providing a better environment in classrooms by providing adequate illumination is also worth-while. Children and older students alike become restless and irritable when called upon to spend long, tiresome hours in dark, gloomy surroundings.

When exposed to bright, cheer-

Sangamo

the time switch with the

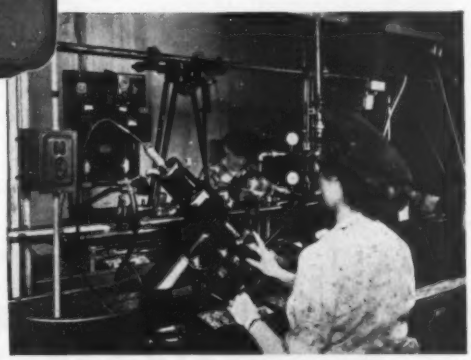
Automatic Memory

will often help increase productivity in

INDUSTRIAL PLANTS

There are many ways in which Sangamo Time Switches can help increase productivity in industry. For instance, they will eliminate "waiting" time on a number of applications where heating is an essential part of a production process. In fact, *any* function which depends upon the opening or closing of electric contacts on a daily repetitive schedule will be performed unfailingly—at the exact time wanted, by the automatic memory of these switches.

The Sangamo "carry-over" Time Switch will operate even during current interruptions. Requires no re-setting.



The motor on this automatic wheel fitter is cut in by a Sangamo Time Switch before working hours, in order to permit parts to heat and expand to normal operating conditions.

INDUSTRIAL APPLICATIONS

For daily pre-heating:

Lead pots for solder operations.
Zinc for injection molding.
Type metal in type foundries.
Dies in plastic molding presses.
Glue in woodworking shops.
Tanks for galvanize dipping.
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For daily circuit control:

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Runway and hall lights.
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SPRINGFIELD, ILLINOIS

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ST51-43

ful surroundings, students' desire to work increases, they are more content, cheerful, less nervous, and do better work.

The lighting installation

Upon acceptance by the school administration of the benefits of and the expression of a desire to provide adequate illumination in a school building, the next step is planning the lighting installation.

Since a considerable amount of the taxpayers' money must be expended to relight a school building today, it is extremely important that the new installation be well planned.

The new installation must provide the proper quantity and quality of illumination. Quantity means an adequate foot-candle level of illumination. In designing a classroom lighting installation, the lighting levels approved by the American Standards Association in 1948 for school lighting may be followed. The values are sponsored by the Illuminating Engineering Society and the American Institute of Architects. (See accompanying tabulation.)

The quality of illumination depends on several factors: reflectance of classroom interiors, brightness of lighting fixtures, and adequate control of daylight. Recommended reflectances for classroom interiors are shown below and should be followed if satisfactory results are to be obtained.

	% Reflectance Value
Ceilings	**80-85**
Walls, except window wall	**50-60**
Window wall	**75-85**
Tackboard	**50-60**
Chalkboard	**15-20**
Desk tops	**35-50**
Trims and desk undercarriages	**30-40**
Floors	**15-30**

If indirect incandescent fixtures or well-shielded fluorescent fixtures are used, the brightness of fixtures will not be excessive.

The lighting fixtures should be spaced so as to provide a uniform distribution of illumination over the entire classroom.

Daylight may be controlled by various types of window shades, awnings, glass bricks, and by proper desk arrangement.

After convincing a school administration that good school lighting pays dividends and selling a well-planned lighting job, one may justifiably have personal satisfaction in the knowledge that he has contributed to the preservation of the eyesight and better citizenship of the youth of America.

While the national defense program will cause a shortage of electrical materials which may slow down the great progress being made, the electric industry must not decrease its effort in the relighting of schools.

Home lighting

(Continued from page 47)

illumination at the sink and on the counter tops.

Example (7)—Here's a room where a shielded circular fluorescent fixture does a good lighting job—in the bathroom. Install one with a trigger start for immediate lighting.

In this room the center ceiling location is best, but in some bathrooms the ceiling unit can be located over the wash bowl to provide better hair-combing light.

The most important mirror in the home is in this room. Put a bracket on each side of the mirror with the center of the outlet box about 60 to 62 inches above the floor. Whether you choose incandescent or fluorescent brackets, be sure they are shielded with glass or plastic for greatest eye-comfort.

A wall switch conveniently located outside the glass-enclosed shower controls a moisture-proof shower light. Four lighting outlets in this bathroom—extravagant! No, look at the plumbing equipment, the tile, and the wall finish. Such a bath demands an equal quality in lighting treatment.

Example (8)—There is no substitute for a center ceiling fixture

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TOMIC THINWALL CONNECTORS and COUPLINGS...
Save!
TOMIC THINWALL CONNECTORS
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in a bedroom. The luminaire should be controlled from the bedroom door; the glassware or plastic should be luminous and neutral in color; it must provide a glareless general over-all light; it should be close to the ceiling—*but it must be there.* That it can be all these things is shown in Example 8.

Light for reading in bed comes from picture lights which have a tubular incandescent (lumiline) bulb at the top and bottom concealed by the picture frame. In addition to ceiling and bed lights, provision must be made for a pair of dresser or vanity lamps, a reading lamp beside a chair, and perhaps a desk lamp.

Television viewing in the living room is forcing non-enthusiasts to seek the peace and quiet of their bedrooms and adequate lighting is essential for the various eye-tasks carried on.

Home lighting and the weather have something in common. People talk about both and do something about both. Yes, they do. People wear raincoats, carry umbrellas, wear rubbers and a frown.

And when we consider home lighting, we talk about it too. People stick a couple of poorly chosen lamps in the living room, a chromium bullet-shaped light on the bed, a circular tube in the kitchen, a bare bulb over the bathroom mirror—and all such lighting leads to a frown.

Office lighting

(Continued from page 43)

designed so that improper shielding will expose the light sources from some angles, causing glare. Obviously then, careful attention should be given to the selection of the luminaire.

Contrast is another item of importance Severe differences in color or finishes of the desks and other furniture, as well as the color of the walls and ceiling, will create a condition of eye discomfort.

In the past, for one reason or another, desk tops have been available mostly in dark colors. Many manufacturers now are providing light-toned desk tops to soften the contrast between the

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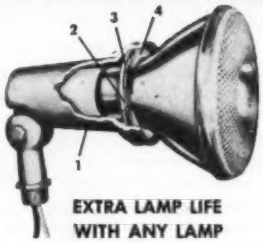
100,000 CANDLEPOWER FOR ONLY 300 WATTS



EXTRA LAMP LIFE WITH ANY LAMP

New Stonco "Cushion-Seal" provides maximum lamp cooling and almost double the life you normally expect from PAR-38 or R-40 reflector lamps outdoors. Write for full details and new catalog material.

The most powerful 300-watt sealed-beam spotlight ever made. Long range, high intensity, oval-shaped beam that can be rotated to exact fixed position desired. Heavy-duty cast aluminum for outdoor, weather-proof service, completely enclosed wiring, adjustable swivel; fully UL approved. Write for catalog and illuminating data on this and other Stonco units—all with ½" standard mounting accessories for complete interchangeability.

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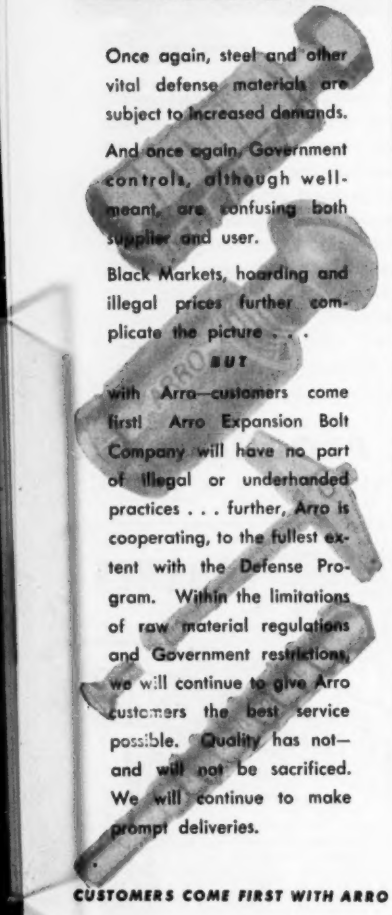

Once again, steel and other vital defense materials are subject to increased demands.

And once again, Government controls, although well-meant, are confusing both supplier and user.

Black Markets, hoarding and illegal prices further complicate the picture . . .

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with Arro—customers come first! Arro Expansion Bolt Company will have no part of illegal or underhanded practices . . . further, Arro is cooperating, to the fullest extent with the Defense Program. Within the limitations of raw material regulations and Government restrictions, we will continue to give Arro customers the best service possible. Quality has not—and will not be sacrificed. We will continue to make prompt deliveries.

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MARION, OHIO

white- or light-colored papers usually used on the desk and the background.

A pastel finish for the walls will be much more acceptable than a deep, heavy color. The ceiling should always be finished in flat white—not off white—but *white*. Shiny or glossy finishes should be avoided. Where acoustical material is used, the lightest tone possible should be used on the ceiling.

The contractor should be concerned with all of these things because they have a definite bearing on the resulting illumination in the office. Where lighting equipment is installed without regard to paint colors used in the room or the finish of desk tops, etc., the seeing conditions may still be unsatisfactory, and the lighting job perhaps blamed.

Costly arguments can be avoided and the customer will be pleased if attention is given to all of these things which make for pleasant seeing conditions. By becoming a specialist who can make all - inclusive recommendations, the contractor places himself in a position to secure the high-class, profitable business in his community.

Office lighting covers a rather wide field of occupancies. There are the exclusive private offices where the atmosphere of the room needs special treatment.

In these offices, there are opportunities for cove lighting, luminaire ceilings, or troffers. Valance lighting such as is used in homes can perhaps be used here. Down-lights placed over the desks or principal work areas in the room may be used to supplement the general lighting.

In large general offices, acoustical ceilings are usually installed, which provide an opportunity for the use of troffers. Relatively close spacing will not only provide high foot-candle levels but also assure even distribution of light.

Where troffers cannot be used, continuous rows of luminaires can be used effectively. In drafting rooms where a high level of illumination is imperative, four-lamp luminaires in continuous rows spaced relatively close together will assure good results.

While filing and mail rooms do not require the decorative or atmospheric effect demanded by other type offices, the same general principles should be followed—high-level illumination, freedom from glare, and light-color finishes throughout the room.

Luminous ceilings have become quite popular. The softness and uniformity of illumination as well as the attractive appearance make them quite desirable for offices.

A variety of these ceilings are on the market—eggcrate, configurated cells, and plastic sheets. Some of them are equipped with acoustical wedges which add to their appearance as well as reduce annoying noises.

The illumination can be varied by the addition of more lamps above the ceiling, and in most cases, the maintenance is not too complicated.

When the contractor becomes equipped with the information which will do a complete, thorough eye-comfort job of office lighting, he will be in a position not only to meet competition, but to sell jobs far above the ordinary competitive jobs.

Opportunities for profit are therefore much greater, and he can take his place in the community as a true lighting specialist.

Lighting for protection

(Continued from page 39)

ner, use lights to aid the vision of the guard and hinder the vision of the intruder.

(4) Provide complete reliability. Wiring and controls should be arranged for complete reliability. The lighting layout should be designed so that failure of a single lamp will not leave a dark spot vulnerable to entry.

(5) Provide adequate illumination. The amount of light required depends upon the accessibility and vulnerability of the property."

Tables in the Handbook show Recommended Illumination Levels and Protective Lighting Methods. Other information pertaining to types of equipment and installation doctrine is also provided.

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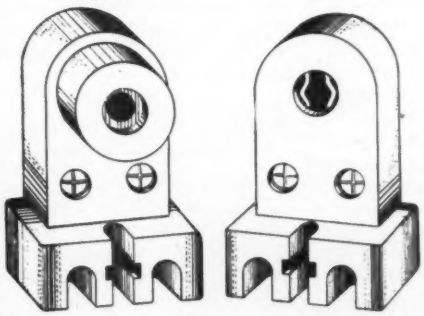

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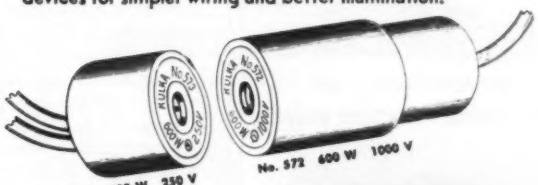

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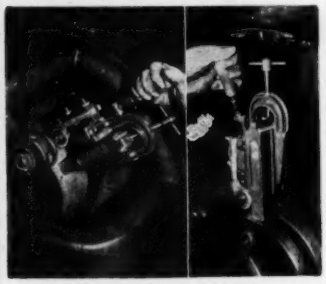

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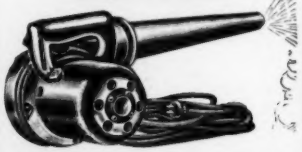

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of protective lighting are:

(1) Lighting of all areas or yards by floodlights mounted high. This method applies particularly to those cases where buildings account for a relatively small part of the total property area.

(2) Floodlights covering all boundary approaches and aimed outward toward a wire fence.

(3) Floodlights aimed along the fence lines.

Frequently, the most practical and effective solution involves variations or combinations of all systems.

Wherever possible, lights should be located so that the glare will be directed toward an intruder. Guards should be stationed in positions and patrolmen should walk in directions and locations where glare will not impair vision.

Entrances, including a considerable area on both sides of the gate, should be brightly lighted. This will assist gate watchmen in making easy and rapid identification of persons entering the area and prevent an intruder from hiding in the vicinity of the gate if he should get past the guard.

Small out buildings, piles of material in storage yards, and narrow passageways between buildings may cast heavy shadows or provide dark areas which could offer sufficient coverage to conceal a man from view. Such places should be carefully lighted.

Illumination of vulnerable locations such as power houses, fuel storage tanks, pumps, valves, switches. etc., should not emphasize or highlight the locations to be protected. Moreover, the lighting equipment, whenever possible, should be mounted on or at such locations and directed outward, lighting the surrounding area.

Searchlights operated by guards in strategic locations are useful for protection and they should be employed with any system. They permit illumination of areas under suspicion and can supplement the permanent installation at any given point in times of emergency.

The power supply to the lighting equipment is a serious and definite problem of extreme importance to the protective lighting system. Since a single weak point or lamp outage might affect the value of the entire installation, continuous power supply should be assured by:

(1) Using underground wiring wherever possible and enclosing all wire above ground in conduit; or

(2) Using an overhead wiring system with the wires well out of reach at all points.

(3) Providing an emergency power plant which will automatically take over if the normal power source fails. For emergencies arising from fire, explosions, accidents, or unruly crowds, portable wide- and narrow-beam floodlights with adequate extension cords and, if necessary, portable power supplies should be available.

Finally, since there now exists the very real possibility that this country may be attacked by air, provision should be made for quickly disconnecting the protective lighting system, as well as interior lights, in case a blackout is ordered.

We sincerely hope that the emergency for which we are preparing will never come to pass. If it does not, lighting equipment which is installed for protection will also be useful for production since it will enable workmen to move more easily and safely in plant areas and speed handling and storing of materials in outdoor yards.

In selecting protective lighting equipment, it should also be remembered that some or all of it will be useful and salvageable after the emergency for reinstallation on employee or community athletic fields and recreational areas.

Lighting for production

(Continued from page 37)

nomically produced.

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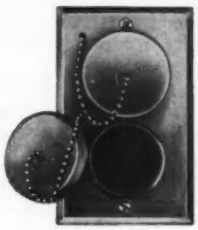

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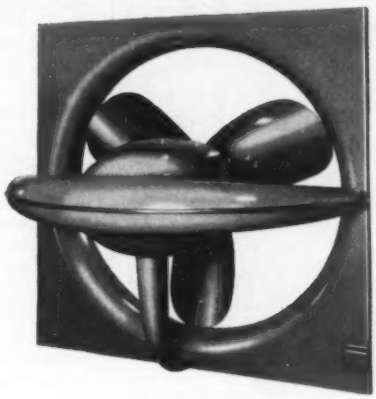

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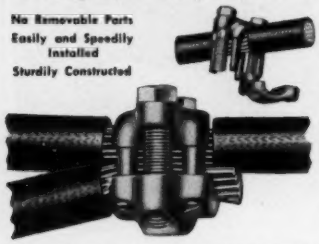

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for lighting. Continuous - row lighting lifts this plant's appearance out of the ordinary and gives it the character of illumination which supports seeing tasks generously.

Workers here will feel the confidence that they can do good work without undue fatigue during the last hour as well as the first hour of the day. The lighting scheme is simple, but it is well above the ordinary, and it is basic aid to economical production with both experienced and new workers.

Paper mills have been better known for neglect of lighting rather than aware of its power to aid production. Here is an instance where exception proves the rule.

The seeing task is not very difficult here, but it can't safely be regarded as casual. Poor lighting is an invitation to poor work.

Given the encouragement and practical help of high-quality, well-diffused lighting, employees working at this job are able to perform inspection promptly and accurately because they can see clearly.

Here we have an example of a special phase of one process in a single industry. While the lighting has been designed to meet the specific problem most efficiently, analysis of the technique applied shows a close relationship to the solutions for the other situations.

The moral for plant managers is: if your plant personnel are worth having, their output should not be handicapped by poor lighting. It costs too much. It costs more than good lighting when you really take account of the consequences.

IES report

(Continued from page 33)

Particularly, factories and offices contributing directly and indirectly to the defense program require re-appraisals of their lighting systems to make sure they are operating at maximum effectiveness.

The revision and publication of the Recommended Practice of Industrial Lighting by committees of the Illuminating Engineering

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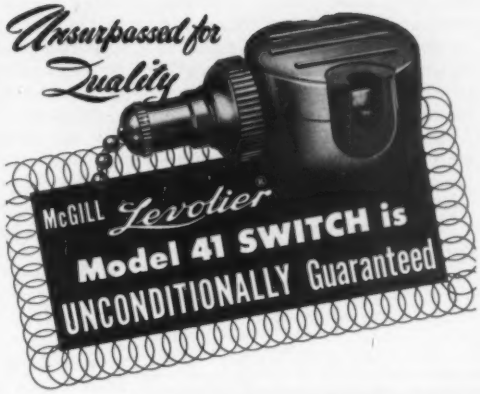

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Society is most timely. This and other recommended practices can be used effectively as a guide to the improvement of existing lighting installations and as a basis for new designs.

However, the illuminating engineer should apply these suggestions thoughtfully because some modification of plan might make a more comfortable and useful lighting system.

The chief function of any lighting system is to improve human vision or to make it more comfortable. Foot-candles are important, but in many cases, possibly, not as important as the direction of light incident to a particular individual at a particular task.

Suppose, for instance, that 40 ft-c are recommended for a certain operation, and this could be secured by a 7-ft by 8-ft spacing of two-lamp industrial luminaires.

It might be that a different pattern, which would provide 30 or 50 ft-c, would place fixtures at the sides of rather than in front of a group of individuals. Glare and shadows would be reduced.

In a large office where there were many lighting complaints, it was noted that women were working on large sheets of penciled figures. It happened that the pattern of fixture arrangement was such that in every case most illumination was reaching the work from the front rather than from the side. The reflected glare was most annoying to all.

It was possible to move desks forward or backward in each row to locations where there was a luminaire centered slightly back of each corner of the working side of the desk.

Prevailing illumination was, therefore, incident over each shoulder and reflected glare was materially reduced.

The point I wish to make is that a standard is important as a starting point in making lighting recommendations, but that a careful analysis of each and every lighting job is most worth-while.

Any illuminating engineer worthy of the name will use a humanistic approach and will remember at all times that his prime function is to help his fellow human beings to see—accurately and comfortably.

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Write for our catalog and price sheets No. 53 and
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ELECTRICAL SOUTH

Oct., 1951

This is one section of the current issue of Electrical South.

Appliance Section

Household and Commercial Appliances • Radio • Television

SELLING USE VALUE—Most appliance dealers depend to a large extent upon the "using-the-user" plan to obtain prospects. The full benefit of this plan is not attained when purchasers fail to get the best use of the appliances because the special features have not been demonstrated to them adequately. The manufacturer of a push button type range with numerous special features has learned through a survey that only 29 per cent of the purchasers had a sales demonstration. After the ranges were delivered, only 38 per cent received home demonstrations to explain the use of special features. As would be expected, few of the purchasers were making adequate use of timers, deepwell cookers, etc. Of the various types of retailers, utility stores rated highest in home demonstrations; plumbing and heating dealers were lowest.

•

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ELECTRICAL SOUTH, 806 Peachtree St., NE, Atlanta 5, Ga.

Winners are welcome in the electrical appliance business, too! We nominate the pace-setting Dominion "Brew-O-Matic" Coffee Maker and its running mate, the family favorite "Grid-O-Matic" Combination Waffler and Sandwich Grill, as two choice items for fall and holiday business builders.

With the big coffee and snack season coming up, these two appliances lend themselves admirably to window and store displays and to other fall promotions. Put these two winners to work for you—now!

A full line of table appliances available through reputable distributors across the nation.

AUTOMATIC COFFEE MAKER

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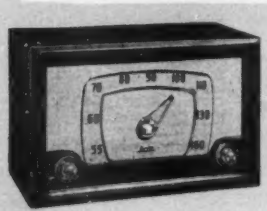
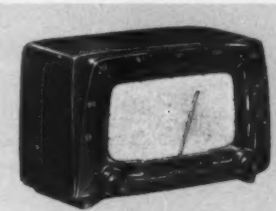


Arvin Stradivara is the finest table radio you can buy! All-new straight AC circuit. Fine hardwood mahogany veneer cabinet means console-like tone for customers who demand the finest. Sells on sight to your quality trade! Model 551T, $49.95.



Arvin Serenade is something entirely new in an AC/DC superhet with five tubes including rectifier. In rosewood plastic with a modern flair, for those who want outstanding beauty, amazing performance, and unmatched value! Model 553T, $24.95.

Arvin Rainbow is the famous shatterproof AC/DC set that stops traffic wherever it's shown! Choice of 6 House and Garden colors—Cherry, Flame, Citron, Avocado, Pebble, and Ivory. Your perfect price leader. Model 540T, $18.95.

Arvin Radio

Velvet Voice (VV) You can SELL the difference!

Arvin Radio is making terrific gains everywhere! It's the most complete radio line for 1952! Eight table radios in 23 color choices—six radio-phono combinations—straight AM or FM/AM—prices all the way from $17.95 to $179.95!

Arvin provides the right answer for every customer—with plenty of chance to trade them up for more profit. Incomparable styling. Unmatched Velvet Voice tone. All backed by a solid campaign of national advertising in leading magazines, plus newspaper mats, radio spots, car cards and displays to help you clinch sales.

There's still time to get in on this rich, fast-selling, profitable program for the Christmas trade. But there isn't a minute to lose. Get in touch with your Arvin distributor now!

All prices subject to change in accordance with OPS regulations.

Arvin Industries, Inc., Columbus, Indiana

(Formerly Noblitt-Sparks Industries, Inc.)

Automatic Clothes Washers and... Hotpoint

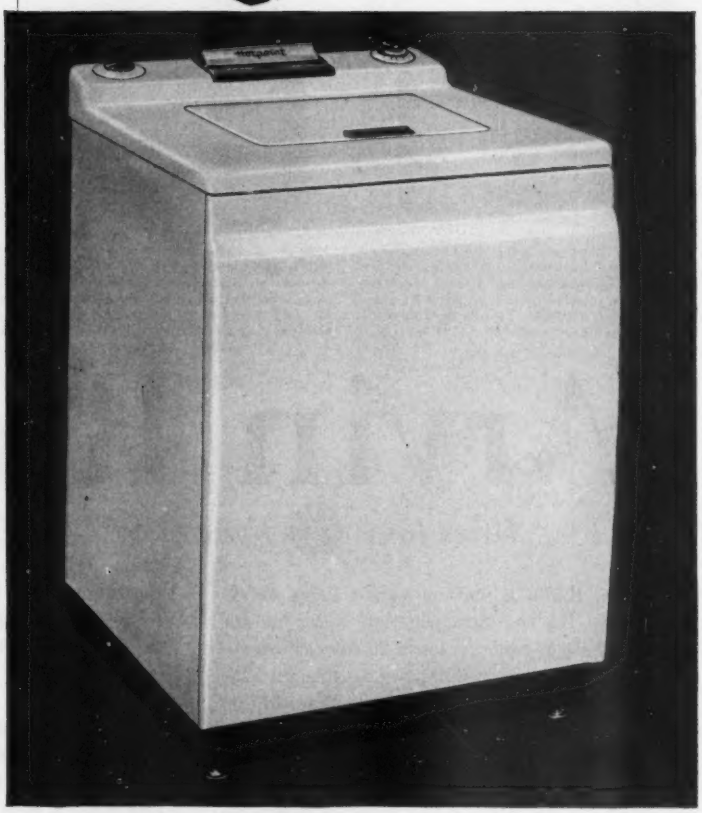
Hotpoint Plus Features

The WOND-R-DIAL Control lets your customers wash *their* way—automatically.

The Hotpoint THRIFTIVATOR, with its exclusive design, creates amazing Counterflo water action to loosen every bit of dirt.

The famous Hotpoint SWIRL-AWAY triple rinsing with two spray rinses and the deep overflow rinse leaves clothes sweet-smelling, fresh and clean. Hotpoint's smooth operating FLUID DRIVE brings quiet operation because of fewer moving parts and minimum vibration.

Hotpoint's convenient top loading—operating signal lights—beautiful styling with enamel finish, plus a host of other features, all add up to a matchless automatic washer you can offer with pride and confidence to your trade.



Switch to Hotpoint!

RANGES • REFRIGERATORS • DISHWASHERS • DISPOSALLS® • WATER HEATERS • FOOD FREEZERS • CABINETS

are Breaking All Sales Records

Automatic Washers

ARE SETTING THE PACE!

With the trend definitely toward complete **automatic** home laundries, latest industry sales figures show unit sales of **automatic** clothes washers 75.6% ahead of the previous year. Dollar volume is ahead 77%—placing **automatic** washers ahead of all other types. Cash in on this market . . . take advantage of this great profit opportunity and identify your store with the progress being made toward Modern Electrical Living.

The performance record of Hotpoint's Automatic Washer has played an important part in bringing about this great demand for **fully automatic** home laundries. The plus features found in the Hotpoint Automatic Washer are making home laundry work a joy instead of a job. That's why more and more homemakers are demanding and getting Hotpoint Automatic Washers—sales that can be yours. Talk to your Hotpoint distributor about Hotpoint's Full-Line Franchise and get on the right track, now, to greater Automatic Home Laundry sales and profits.

A Custom-Matched Home Laundry

With these sensational appliances—the new Hotpoint Automatic Washer and Dryer—you can offer your customers the world's finest Home Laundry Center. Perfectly matched, they're the time and labor-saving stars of the industry.

for FULL-LINE LEADERSHIP!

Hotpoint Inc.

(A General Electric Affiliate)
5600 W. Taylor St., Chicago 44, Ill.

AUTOMATIC WASHERS • CLOTHES DRYERS • ROTARY IRONERS

Announcing...

MEIER AUTOMATIC ELECTRIC HEATING

BUILT WITH *YOU* IN MIND!

- Designed for SELLING
- Engineered for PERFORMANCE
- Manufactured for YOUR PROFIT and CUSTOMER SATISFACTION

MEIER AUTOMATIC PORTABLE
FLOOR FURNACES

Here is the heater that "heats where it's needed." The Meier portable floor furnace is fully adjustable within full 90° radius so that heat may be directed up or down at will. *Automatic Thermostatic Control* . . . sensitive thermostat maintains desired set heat. Both *Radiant* heat and *Circulated* heat . . . for quick, penetrating warmth and gentle air circulation for maximum comfort. Equipped with five foot cord. Finished in Hawaiian tan hammertone. Four sizes to meet every requirement . . . 2,000 watt, 3,000 watt, 4,000 watt and 5,000 watt.

MEIER AUTOMATIC ELECTRIC
WALL FURNACES

Modern automatic heating at its finest. Beautifully designed to blend with modern decorative schemes. Finished in Hawaiian tan hammertone. Maximum safety—grille cannot be removed unless switch is in "off" position. Bright copper-clad reflector . . . both *Radiating* and *Circulating* heat. Accurate built-in, bi-metal thermostat. Heating coil of high grade nickel chromium—guaranteed for five years against burnouts. Four models to fit every required installation . . . 1,500 watts, 2,000 watts, 3,000 watts and 4,000 watts.

New, complete comprehensive Meier Electric Heating catalog is just off the press . . . send coupon at the left for your copy.

Mail this coupon directly to
Meier Electric & Machine Co., Inc.,
3527 E. Washington St., Indianapolis, Indiana.

NAME.....

COMPANY.....

ADDRESS.....

CITY.....

STATE.....

Famed for Dependability MEIER QUALITY EST. 1904 Throughout the World

MEIER ELECTRIC & MACHINE CO., INC.
3527 E. WASHINGTON STREET
INDIANAPOLIS 7, INDIANA

(Additional items will be found on pages 7 and 105)

2004—Air Conditioning Equipment. New Bulletin No. 3158-B, "Central Air Conditioning Equipment," contains comprehensive information on this type of equipment along with charts, specifications, and maintenance instructions. The bulletin has been released by Buffalo Forge Co., P. O. Box 985, Buffalo 5, N. Y.

2010—Water Heaters. An illustrated folder describing Bell Water Heaters and the ten-year guarantee and warranty is available from Adacar Mfg. Co., Napier Field, Dothan, Ala.

2012—Room and Unit Heaters. Electromode Corp., 45 Crouch St., Rochester 3, N. Y., has announced two new catalogs, each of which contains descriptions, complete specifications, illustrations of the units, and shows typical installations, as well as other helpful information concerning heating by electricity. Catalog EC-62 is the industrial catalog, and No. EC-63 is the domestic catalog.

2014—Hot Water Heaters. Informative and well-illustrated data are available from M. M. Hedges Manufacturing Co., Inc., Chattanooga, Tenn., on their line of Mertland Automatic water heaters.

2018—Electric Fans. A 28-page, profusely illustrated booklet describes in complete detail, this company's line of fans. Booklet available from Emerson Electric Manufacturing Co., 81st and Florissant Ave., St. Louis 21, Mo.

2022—Window and Attic Fans. A four-page catalog piece completely illustrated and containing descriptive information on the new low cost "all in one package" window and attic fans has just been released by the Viking Air Conditioning Corp., 5601 Walworth Ave., Cleveland 2, Ohio. Illustrations of automatic ceiling shutter and automatic electric timer are included.

2024—Electric Water Heaters. New specification sheets are now available for a full line of cylinder and table top models, featuring the Water Hotter, from the White Products Corp., Middleville, Mich.

2028—Fans. Catalogs Nos. 863 and 864, just issued by Chelsea Fan & Blower Co., Inc., 639 South Ave., Plainfield, N. J., include descriptive copy, specifications, dimensions, photographs, etc., of a full line of fans for residential, commercial, and industrial uses. These catalogs include information on 17 types of ventilating and comfort cooling equipment varying in size from 12 inches to 60 inches.

2030—Electric Fans & Drills. Signal's complete line is shown in a new catalog just off the press, featuring a wide variety of desk, pedestal, exhaust, and vent fans. Literature on drills, telegraphic equipment, and motors is also available from the Signal Electric Mfg. Co., Menominee, Mich.

2034—Electric Flat Irons. Full information on American Beauty Electric Flat Irons in a weight, a shape, a size for household, as well as every industrial and manufacturing use, is available in literature from the American Electrical Heater Company, 6110 Case Ave., Detroit 2, Mich.

2038—Murray Ventilating Fans. A set of specification sheets is available describing the Murray line of fans, including 20 and 24 inch window fans and vertical and horizontal ventilating fans H. C. Biglin Co., Inc., 177 Harris St., NW, Atlanta 3, Ga., is exclusive sales agent for the line which is manufactured by Murray Co. of Texas, Inc.

2040—Electric Blowers and Exhausters. Bulletin 3014-D describes Types "E" and "RE" Buffalo blowers and exhausters manufactured by Buffalo Forge Co., P. O. Box 985, Buffalo 5, N. Y. Characteristics of the blowers, graphs, charts including capacities and static pressure, and exact dimensions are all contained in the 8-page folder.

2046—Household Electrical Appliances. Dominion Electric Corp., 120 Elm St., Mansfield, Ohio, offers catalog information and detailed specifications on a complete line of table appliances, called "Family Favorites."

2056—Radiant Heaters. Edwin L. Wiegand Co., 7500 Thomas Blvd., Pittsburgh 8, Pa., has prepared a portfolio of Chromalox Radiant Heater Application Reports. In addition, the portfolio includes catalog sheets and technical data on the Chromalox "RAD" heaters.

2058—Exhaust Fans. A new Emerson-Electric Exhaust Fan catalog, illustrating and describing in detail this line of fans for all types of buildings, is offered by the Emerson Electric Mfg. Co., 81st and Florissant Ave., St. Louis 21, Mo.

2064—Electric Fans. An attractive, 8-page, 62nd Season Catalog of Zephair fans has been made available by the Hunter

ELECTRICAL SOUTH
806 Peachtree St., NE
Atlanta 5, Ga.

October, 1951

Gentlemen:

Please send me the bulletins and catalogs indicated.

(Print Plainly)

Name..... **Title**.....

Company.....

Address.....

City & State.....

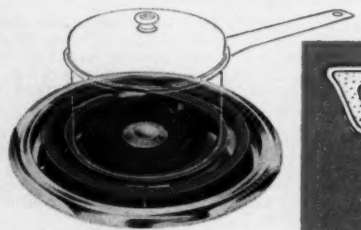
Circle numbers below. Bulletins and catalogs will be mailed promptly.

2004	2010	2012	2014	2018
2022	2024	2028	2030	2034
2038	2040	2046	2056	2058
2064	2066	2070	2072	2078
2088	2090	2092	2102	2104
2106	2108	2110	2112	2114
2116	2118	2122	2124	2132
2134	2136	2138	2140	2142
2144	2146	2150		

Get more with CHROMALOX "Supreme" "2-units-in-1"

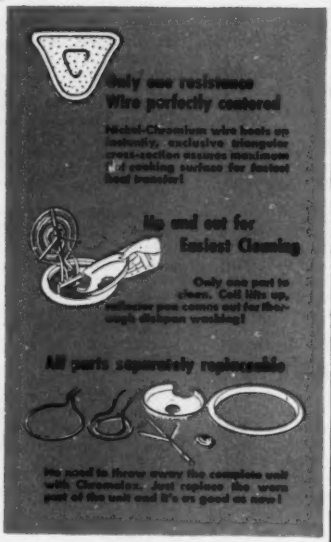
UNIFORM OVERALL HEAT for the largest utensil

EASIER SELLING MORE PROFIT



Inner Hot-Spot—that saves up to 45% of the electricity used in small pans and percolators.

Outer Coil Heat—for uniform, economical cooking in large utensils and frying pans.



RC-88

Get the Full Story Today!

send for the booklet "The Switch is On", it shows you how to profitably sell and service all electric ranges

Range Unit Division: EDWIN L. WIEGAND COMPANY
7600 THOMAS BOULEVARD, PITTSBURGH 8, PA.

CHROMALOX
Electric Cooking at it's Best!

C. B. Rogers, 1000 Peachtree St., N.E. Atlanta, Ga.; L. R. Ward Co., 2711 Commerce St. Dallas 1, Texas; 932 M & M Bldg., Houston 2, Texas; 1511 Louisiana St., New Orleans 15, La.; 1519 So. Boston St., Tulsa, 5, Okla.; W. R. Phillips, P. O. Box 2561, Raleigh, N. C.; W. R. Phillips Jr., 3125 Lamb Ave., Richmond 22, Va.

Are You Making Use of Our Reader Service?

The editorial and business staff of ELECTRICAL SOUTH is eager to serve you. One way in which we can help you is to make it easy for you to draw upon the wealth of technical and promotional material available from manufacturers.

In the accompanying pages are the descriptions of scores of useful catalogs, application information booklets, and technical publications. These are available without charge.

Check over the list of publications available, circle the numbers of the ones you need, and mail the coupon to us with your name, title, company and address plainly written. We will tell each manufacturer to send directly to you the information you want.

●

The staff of ELECTRICAL SOUTH will be glad to help you with other problems. They will obtain expert advice for you on both technical and business problems. The services of a number of consultants are available. Whether your problem relates to sales promotion, lighting or wiring layouts, applications of the National Electric Code, or equipment application, it will receive careful attention.

●

Address your requests to:

Reader Service
ELECTRICAL SOUTH
806 Peachtree St., NE
Atlanta 5, Ga.

Fan & Ventilating Co., P. O. Box 2858, Memphis 2, Tenn. A comprehensive description of this company's products is given, with complete specifications and dimensions.

2066—Shutters & Dampers. A 12-page catalog (No. 46) is available from the Elgo Shutter Mfg. Co., 2738 W. Warren Ave., Detroit 8, Mich., describing the 17 different types of shutter and dampers manufactured by them, and as used in connection with ventilating and air-conditioning installations.

2070—Zephair Fans. Hunter Fan and Ventilating Co., Inc., 400 So. Front St., Memphis, Tenn., offers a new 8-page catalog containing detailed information on the Hunter Zephair Fans, for home and industry.

2072—Reed Unit-Fans. Two new 8 page booklets on unit-fans have been published by Reed Unit-Fans, Inc., 1001 St. Charles Ave., New Orleans 8, La. Material included in these booklets covers design, accessories and installation of the Reed window and attic fans respectively.

2078—Sales Helps. A variety of sales helps, including Sound Slide Colored Training Films, How to Sell Booklets, Consumer Pieces, Specification Sheets, Demonstration Kits, Display Cards and Promotion Kits for selling and demonstrating General Mills Home Appliances—Pressure Quick Saucepan, Tru-Heat Iron and Steam Ironing Attachments are available to dealers from General Mills, Inc., Home Appliance Dept., 1620 Central Ave., Minneapolis 13, Minn.

2088—Air Circulators. Vornado's complete line for 1950 presented in a four page, three color catalog sheet (Form 9060) includes a wide variety of desk, pedestal, tabletop turnabout, and turnabout window fans. Also available is a descriptive folder on Vornado's new turnabout casement window fan (Form 9082). The O. A. Sutton Corporation, 1812 West Second St., Wichita, Kansas.

2090—Fan Blade & Baffle Outfit. An illustrated catalog page describing their Knock Down Fan Blade & Baffle Outfit has been announced as available from S. J. Stewart (Electric), 527-31 St. Joseph St., New Orleans 12, La.

2092—Air Circulators and Window Fans—The Complete Line of Kisco Floor Model Air Circulators and Portable Window Fans for 1951 is illustrated and described in a series of two-color catalog sheets and envelope stuffers available to the trade. A Special Sales Manual containing product and sales information is available for use by Dealers handling Kisco Products. Kisco Company, Inc., 2400 Dekalb St., St. Louis, Mo.

2102—Marquette Gas Ranges. Five beautiful models covering the entire desires of any housewife featured in color and with individual specifications and catalog pages may be secured from Marquette Appliances, Inc., 307 East Hennepin, Minneapolis, Minnesota.

2104—Marquette Home Laundry Equipment,—Includes Washers, Dryers, and Ironers. For well-illustrated catalog pages that bring out the features and selling points of this popular priced laundry equipment write to Marquette Appliances, Inc., 307 E. Hennepin, Minneapolis, Minnesota.

2106—Fan and Centrifugal Blowers. Catalog No. 513-B. Vital specifications 1950-Fresh-Air Maker Fans-Hy Duty Centrifugal Blowers. Attic, Portable, Window, Exhaust fans. Single and double inlet blowers. Ventilating Division-Schwitzer-Cummins Co., 1125 Mass. Ave, Indianapolis, Indiana.

2108—Household Refrigerators, Farm and Home Freezers. Electric Ranges. Complete information regarding Coolerator space-saver "motor on the back" refrigerators, a revolutionary new combination freezer-refrigerator and automatic seven heat push-A-Button electric ranges. Write Coolerator, Duluth 1 Minnesota.

2110—Select-A-Range. Landers, Frary & Clark, New Britain, Conn. Eight page folder giving full information on Universal's revolutionary new Select-A-Range with the Convenience Level Oven. Illustrates various parts of range; six Royal Barry Wills kitchens and tells how to install it.

2112—Oil Heaters. An elaborate colorful 16 page catalog, entitled "Nescontrol Heating" describing and illustrating the complete Nesco line of Fuel Oil Heaters and Kerosene Heaters, is available from the National Enameling and Stamping Company, 270 N. 12th St., Milwaukee 1, Wis.

2114—Electric Heataires. A new, colorful, twelve-page booklet from Markel Electric Products, Inc., 145 Seneca St., Buffalo, N. Y., unveils a complete line of wall-attachable, well-recessed, and portable heaters. Heetaire models for every room in the house and other applications are described.

2116—Replacement Heating Units—For electric water heaters. Information on the complete line of various wattages, voltages, and shapes of water heater units of the Immersion Type can be obtained by writing to Tuttle & Kift, Inc., 825 N. Monitor Ave., Chicago 39, Illinois.

2118—Electric Fans—Robbins & Myers, Inc., Springfield, Ohio offers an attractive, 20-page illustrated catalog covering outstanding features, design details, and performance ratings of R & M domestic, commercial and industrial fans for 1950. Special material available covering new 10" and 12" desk fans.

2122—Surface Heating Units—For electric ranges. Complete information on fitting the famous TK Monotube Electric Range surface heating units into all types of electric ranges can be obtained by requesting the replacement manual from Tuttle & Kift, Inc., 1825 N. Monitor Ave., Chicago 39, Illinois.

2124—Evaporative Air Coolers—Home and commercial. Essick Manufacturing Company, 1950 Santa Fe Avenue, Los Angeles 21, California, offers its complete line of eighteen models, ranging from 1500 CFM one room fan type coolers to 12,500 CFM. industrial building coolers. Featured this year is the Revolutionary "Pour-In" type, completely self contained washed air room cooler. Write for further information.

2132—Industrial Fans. Circulators & Devices announces the publication of their new, up-to-date 1951 catalog illustrating their complete line of ventilating equipment, including Pedestal, Wall & Ceiling fans, Attic Fans, Exhaust Fans, new reversible window fans, blowers, shutters, etc. Write to Circulators & Devices, 128-168-32nd Street, Dept. S. B. Brooklyn 32, New York, for your free copy.

2134—Appliance Trucks. A four-page catalog is available describing Escort Appliance Trucks manufactured by Stevens Appliance Truck Co., Box 897, Augusta, Ga. Twelve models are illustrated, all featuring the patented crawler tread which makes it easy to move the trucks up or down steps or over obstacles.

2136—Robbins & Myers '51 Fans. An 11-page illustrated catalog, in color, describes the 1951 fan line of Robbins & Myers, Inc., Fan Division, 387 So. Front St., Memphis, Tenn. Window fans, oscillating fans, floor fans, air circulators and ceiling fans, package attic and belt-driven fans, exhaust fans and shutters, and ventilating fans are included.

2138—Store Fixtures. Units comprising Flexo-Step displays, as well as combinations that can be obtained with the various units, are described and illustrated in Bulletin 3-50-5M, available from Add Sales Co., 714 Commercial St., Manitowoc, Wis.

2140—Ventilating Equipment Circulators & Devices announces the publication of their new, up-to-date 1951 catalog illustrating their complete line of ventilating equipment including Pedestal, Wall and Ceiling fans, Exhaust Fans, new reversible window fans, blowers, shutters, etc. Write to Circulators & Devices, 98-168-32nd Street, Dept. E. S. Brooklyn 32. New York, for your free copy.

2142—Gas and Electric Water Heaters. Two bulletins, in color, devoted to Jackson automatic gas and electric water heaters, have been announced by W. L. Jacnson Mfg. Co., Inc., P. O. Box 26, Chattanooga 1, Tenn. Table-top and round electric heaters, as well as floor furnaces, are described in one; Jackson's 20- and 30-gallon gas heaters in the other. Warranties on both gas and electric models are explained.

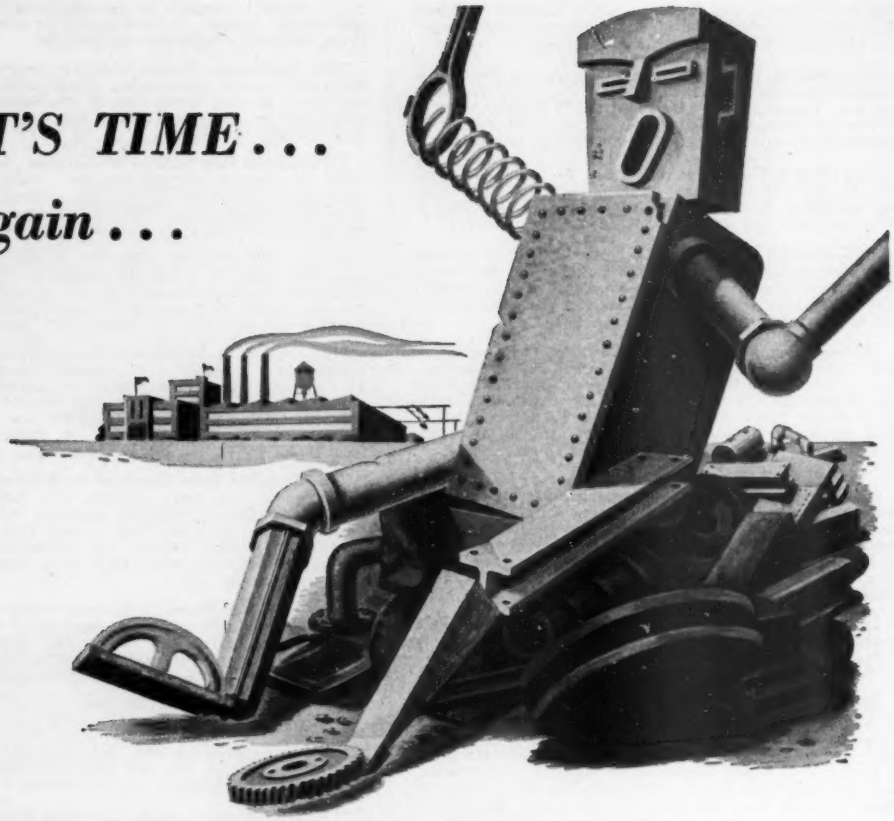
2144—Ventilating Products. The complete line of Schwitzer-Cummins Ventilating Products are described and illustrated in a new condensed catalog. Included are attic, window, cabinet, portable and exhaust fans and single and double inlet blowers. Copies are available from Schwitzer Cummins Co., 1125 Massachusetts Ave., Indianapolis 7, Ind.

2146—Repair Parts. "Repair Parts for all Traffic Appliances" is the title of a 46-page catalog available from Pearsol Appliance Co., 2010 Commerce St. Dallas, Texas. This supply parts catalog, No. D-49, has been prepared for dealers as a parts and service manual, and lists all popular repair parts for all traffic appliances (electrical housewares).

2150—Apartment-Size Electric Range. Complete specifications on the State Pride apartment-size electric range, manufactured by State Stove & Mfg. Co., 509 — 25th Ave., No., Nashville, Tenn., are contained in a new two-color catalog sheet. The stove is illustrated, and many consumer advantages are listed.

IT'S TIME . . .

again . . .



TO WAKE UP SCRAPPY!

Scrap's getting scarce again . . . compared to the amounts we need . . . and it's up to *all* of us to *help* produce enough steel.

107,000,000 tons of steel is the present rate of production in 1951 . . . 119,500,000 tons is expected in 1952.

Last year, 1950, we produced 97,800,000 tons.

All that extra steel—enough to take care of *both* military and civilian needs—calls for *more scrap iron and steel.*

Scrap Inventories Are Alarmingly Low

While steel mills are producing at a greater rate than ever, scrap inventories have dwindled. Many mills are operating on a hand-to-mouth basis with shut-downs threatened unless we furnish more scrap.

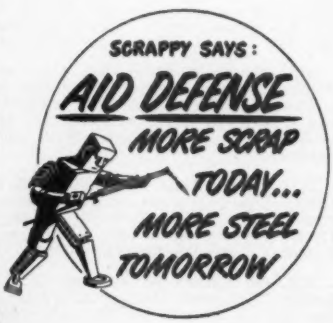
We *do* have the scrap. It's everywhere, not just in the form of *production* scrap—the "leavings" of machining, normally turned over to scrap dealers . . . but also in the form of *idle* metal: obsolete machines and tools, no-longer-usable jigs and fixtures, gears, chains, pulleys, valves, pipe, abandoned steel structures, etc.

We must have this *idle* metal to keep the furnaces running.

Please cooperate. Set up a Scrap Salvage Program in your plant—*now.* For a complete plan on "how to do it", write for booklet "Top Management: Your Program for Emergency Scrap Recovery". Address Advertising Council, 25 W. 45 Street, New York 19, N. Y.

Why Do We Need *Scrap?*

Steel is made half from pig iron, half from scrap. With production on the increase, more scrap must be purchased. And it's up to you to "dig it out" and sell it.



NON-FERROUS SCRAP IS NEEDED, TOO!

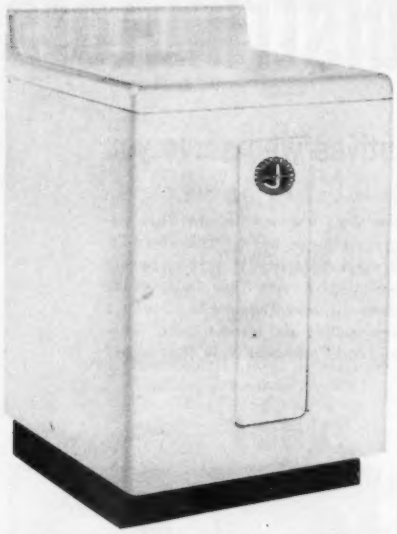
This advertisement is a contribution, in the national interest, by

ELECTRICAL SOUTH

A PUBLIC SERVICE PROJECT THE ADVERTISING COUNCIL

For Sales Action . . . Sell Jackson!

One of America's Leading Lines



3 GREAT TABLE-TOP SERIES, beautifully finished in gleaming white with heavy gauge galvanized tanks protected by 2 inches of insulation—30 and 40 gallon capacities. 230/240 Volts A. C. only.

Approved by Underwriters Laboratories Inc.

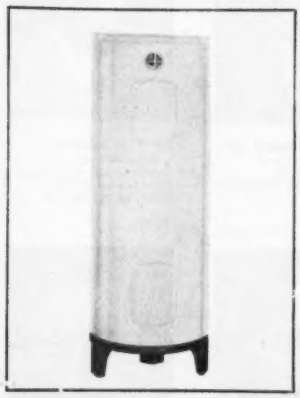
For your exclusive line . . . your first line . . . or second line . . .

JACKSON will make money for you

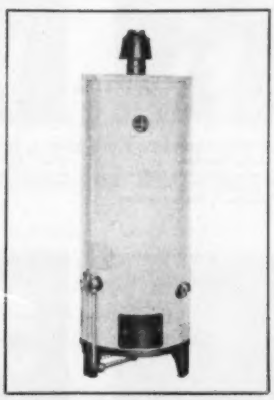
Take your pick or take all of them—each of the water heaters shown here is a leader in its field and a sure-fire profit item.

The Jackson line offers you a wealth of sales features that mean business for you because home owners like the safety, efficiency, and durability built into these handsome water heaters. Whether it is a round model or counter style, each heater offers advantages to home planners that make them ready sellers.

Get full information NOW
Phone, wire or write for details on these heaters and the Jackson franchise.



AUTOMATIC ELECTRIC ROUND WATER HEATERS in 6 sizes from 10 to 80 gallon capacities. Fully insulated, with white enamel jackets. 230/240 Volts A. C. only.



AUTOMATIC GAS WATER HEATERS in 20 and 30 gallon capacities both protected by automatic safety features and enclosed in beautiful white jackets. Fully insulated with high burner efficiency.

Approved by American Gas Association

W. L. JACKSON MANUFACTURING COMPANY, INC.

1222 E. 40th Street — Chattanooga, Tennessee

SALES REPRESENTATIVES

J. A. LLOYD FACTORY SALES AGENT

Warehouse Stocks Carried

375 Whitehall St., S. W.
Atlanta, Georgia
Telephone WALnut 6248

2506 Lucena Street
Charlotte, N. C.
Telephone 5-8258

L. O. LEDFORD SALES AGENCY

311 Chickamauga Avenue
Rossville, Georgia
Telephone 89-5554

GEORGE H. ANDERSON COMPANY

P. O. Box 2235
Memphis, Tennessee
Telephone 9-2724

AD NO. 2 IN A NEW SERIES

*Thor** distributors

Know the *Thor* distributor executives who serve you

Thor Corporation is rightfully proud of the outstanding Thor distributors who are pictured here this month! We believe that when it comes to the things that really count in helping Thor dealers with *advertising*, *merchandising*, *sales* and *service* —our distributors are away out in front. In fact, that's WHY they are Thor distributors!

Shown here are a few more of the Thor distributors who serve our dealers in the Southern Division. All of our distributors are working toward a common goal: to give every Thor dealer all the tools he needs to sell more Thor products—to do a constantly better selling and merchandising job—with bigger and better profits for every Thor dealer!

Southern Division

MR. S. A. GASSAWAY
Orgill Brothers & Company
10 West Calhoun
Memphis, Tennessee

MR. CHARLES R. REW, JR.
Sales Manager
Alabama Appliance Co.
1st Ave. North & 13th St.
Birmingham, Alabama

MR. C. L. LANNIN
Sales Manager
Carolina Appliance Company
P. O. Box 1997
Charlotte 1, North Carolina

MR. D. M. GILTINAN, JR.
Eskew, Smith & Cannon
Brooks at Smith St.
Charleston, West Virginia

MR. E. H. HOOKS
Sales Manager
Commonwealth Sales Corp.
1601 Summit Avenue
Richmond 20, Virginia

MR. A. G. RIDDICK
C. T. Patterson Company, Inc.
800 South Peters St.
New Orleans 7, Louisiana

MR. GLEN J. WILDER
Sales Manager
Pensacola Hardware Company
20-24 East Gregory St.
Pensacola, Florida

MR. J. F. GREENAWALT
Sales Manager
Electric Sales & Appln., Inc.
1550 N. E. 2nd Avenue
Miami 32, Florida

MR. E. H. WILLIFORD
Sales Manager
Carolina Sales Corporation
1420 Evans St.
Greenville, North Carolina

MR. L. L. DAVIS
Moore-Handley Hardware Co.
492 Craighead St.
Nashville, Tennessee

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are the best in America!

We're proud of our distributors' salesmen! They know how to help *Thor* dealers sell!

Their time is your time! Thor distributors' salesmen take pride in helping you move merchandise, make more money.

Next time your Thor salesman calls, ask him for tested ideas on bringing in prospects that can be readily turned into customers!

Here's a friendly challenge from your Thor salesman. Try the short quiz below on him. Score 25 points for each correct answer. If your Thor salesman fails to score 100—we'll buy you a smart new Stetson Hat. Ask the questions if you want to win!

LOOK!

Win yourself a new Stetson Hat!

QUESTION	SCORE
1. What can I do to improve my sales this month?	☐
2. What is the Thor Quality story on wringer washers—and how will it help me build my sales?	☐
3. How can I double my Thor Wringer Washer business? . . .	☐
4. How can I increase my store traffic?	☐

"ASK IF YOU WANT TO RECEIVE!"

P.S. Here's further proof that your Thor salesman is determined to help you succeed—by giving you more and more powerful successful selling ammunition! That's why he'll appreciate your testing *his* knowledge of the latest Thor selling aids, by asking him the above questions. Use his answers! You'll find they're the *right* answer to today's competitive conditions.

Bob

M. R. (BOB) WILSON
General Sales Manager

Thor CORPORATION, Chicago 50, Illinois

On the Appliance Front

INDUSTRY NEWS BRIEFS — GOVERNMENT REGULATIONS

Dealer inventories still above normal

◆ INVENTORIES of appliances, radio and TV sets are still high but are beginning to drop. At the manufacturer and wholesale level August inventories of major appliances were running from twice to three times what they were a year ago, and dealer inventories were proportionately high.

A group of radio and TV manufacturers, recognizing the disadvantages of doing business by guesswork, have engaged Dun and Bradstreet, Inc., to make a monthly survey of appliance dealer radio and TV inventories. The first survey, completed in August, indicated that dealers had close to a million TV sets on hand. A little less than half of these were table models.

The survey also disclosed that dealer stocks of new home radios are somewhere between 1,400,000 and 1,700,000 with new battery portable radios accounting for about 400,000 of the total.

Dealer stocks of radios and TV sets decreased about 15 per cent during the month of July, and stocks were expected to decrease still further as the sales picture improves this fall.

Appliance excise taxes extended

◆ THE FINAL shape of the federal tax bill has not been determined as this issue goes to press, but the Senate Finance Committee has voted to extend the excise tax to several appliances not covered previously. A 10 per cent excise tax would be placed on vacuum cleaners, washing machines, and garbage disposers. This differs from action taken in the House which would have included electric mangles, electric dishwashers, clothes driers, and numerous other electric, gas, and oil appliances.

The Senate Finance Committee action coincided with the House action in eliminating the 10 per cent excise tax on electric heating pads, and in holding the tax on radio, TV sets, and combination sets at the present 10 per cent.

Consumer durables get less metal

◆ FOURTH QUARTER allotments of steel, copper, and aluminum to manufacturers of consumer durable goods, such as refrigerators, ranges, washing machines, home freezers, and similar products, have been reduced further than was expected. The cutback in steel is to 58 per cent; that is, manufacturers of these products will now get 42 per cent less steel that they used a year ago. The corresponding reduction in copper and aluminum will be 46 per cent and 54 per cent, respectively.

Some idea of the effect of these cutbacks on appliance production is to be found in statements from the Home Laundry Equipment Industry Advisory Committee. The manufacturers protested that the fourth quarter allotment rate would provide for production of washing machines at an annual rate of 2,300,000 as compared with the base period production rate of about 4,250,000 per year. They estimated the country's annual minimum needs at 2,971,000 washing machines.

The serious shortage of nickel, the heat resistant metal that is essential to many appliances, is having its effect on the manufacture of electrical housewares such as toasters, flat irons, waffle irons, etc. Through ingenuity manufacturers have managed to hold production at a high level with greatly reduced amounts of nickel, but some manufacturers have discontinued certain items and will produce less housewares in the fourth quarter.

The Radio-Television Manufacturers Association has predicted a reduction of 50 per cent in radio and TV receiving tubes by Dec. 1 unless relief in the way of more nickle is made available. Manufacturers managed to produce 229 million tubes in the first seven months of 1951 with two-thirds of the nickel used to produce 191 million tubes in 1950.

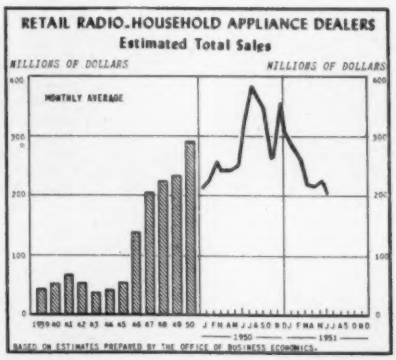
FRB tightens trade-in rules

◆ NEW RULES aimed at halting what the Federal Reserve Board termed a growing tendency to make phony "no money down" offers on household appliances were issued September 8.

The board issued new regulations for judging trade-in deals on television sets, refrigerators and other appliances under consumer credit controls. Violations

Sales trend—

Sales of retail radio and appliance dealers were estimated at 204 million dollars during July, 1951, by the U. S. Office of Business Economics, a decrease of 18 million dollars from June, 1951. The July, 1951, sales were 125 million dollars less than sales reported for July, 1950, the first month of the Korean War.



Connection for Color

Provides plug-in jack for attaching an auxiliary Zenith color receiver when available.

"Fringe-Lock" Control Circuit

Produces and permanently holds finest pictures ever seen in weak or outlying areas.

Provision for UHF

Permits insertion of tuner strips to receive coming UHF stations without a converter.

Blaxide® "Black" Tube

Brings out rich picture contrast in fully-lighted rooms as eye doctors recommend.

Automatic One-Knob Tuning

Tunes in perfect-quality pictures and sound with one twist —no knob fiddling.

Tilted Face Plate

Works with wide angle escutcheon to cut down reflections and annoying glare.

ALL THIS IN NEW ZENITH "ELECTRONEX" TUBE TV

WITH THE WORLD'S FINEST "FULL-FOCUS" PICTURE

At last, the long-time dream of TV science has been realized—perfection in pictures to equal perfection in sound!

Now Zenith's new "Electronex" Tube brings you the "impossible!" A "full-focus" picture—sharp and clear over the entire tube face. A picture that stays in focus even despite the line voltage variations that throw ordinary sets out of focus.

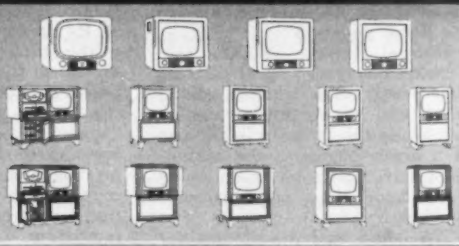
And that's not all! Powered by the amazing new Wonder-Chassis, new Zenith "Electronex" Tube TV is backed by the grandest array of selling features ever offered under one name. Provision for UHF, connection for an auxiliary color receiver, new "Fringe-Lock" Control Circuit, the famous Blaxide® "Black" Tube—they're all here to make this your biggest, best, most profitable TV selling season ever.

Don't take our word for it . . . see this great new Zenith line for yourself! Sell features, sell Zenith. Sell new "Electronex" Tube Zenith TV!

NEW ZENITH RADIO PHONOGRAPHS WITH FAMOUS COBRAMATIC® RECORD PLAYER!

®Reg. U.S. Pat. Off.

Television's BIG NEWS Line . . .
17 and 20 Inch ZENITH "ELECTRONEX" TUBE TV!



ZENITH
"LONG DISTANCE" RADIO and TELEVISION
THE ROYALTY OF RADIO AND TELEVISION

"I suppose you called me in to fire me for losing that $8,000. order!"

may be punished by fines up to $5,000 and jail sentences up to a year.

The board said the new rules do not prevent any dealer from giving "any trade-in allowances, rebates or discounts that he desires" so long as they are "not used as a cloak to conceal evasions of the down payment requirements."

Since the new Economic Controls Law went into effect Aug. 1, there has been a surge of "no money down" ads on appliances. The new law specified for the first time that trade-ins on appliances might be counted toward the down payment.

Federal Reserve officials said a racket has grown up of offering ridiculously high trade-in allowances and of rigging prices so that while the trade-in is allowed as a down payment, the installment buyer pays as much as he would have for a purchase with no trade-in.

The board said it will consider that credit controls have been violated where one or more of these things happens:

(1) The dealer "in fact did not receive delivery and possession" of the article on which he made a trade-in allowance.

(2) The dealer applies against the required down payment a trade-in allowance on property "having a value that was nominal or negligible, or that bore no reasonable relationship" to the allowance.

(3) There has been an "increase in the price of the article sold" to offset the amount allowed for the trade-in.

(4) The dealer does not keep records showing the cash value allowed for each trade-in, plus anything else needed to establish that it was a good-faith transaction.

Bonus plans limited to established practice

◆ PAYMENT of Christmas bonuses to the employees under the jurisdiction of the Salary Stabilization Board will be permitted this year the same as last, Joseph D. Cooper, executive director, has announced. He emphasized that no basic changes in the bonus regulation are contemplated and that employers must abide by the regulation.

"There is no authority for the approval of new bonus plans," Mr. Cooper said. "Obviously a bonus can represent a substantial inflationary force. A company which has never paid bonuses before will not be permitted to do so at this time. Bonuses are presently permitted in accordance with past practice but not under other circumstances."

Regarding payment of Christmas bonuses, Mr. Cooper said "the answer is yes, but the Christmas bonus must be charged against the total amount available for bonuses in accordance with General Salary Stabilization Regulation No. 2" and continued:

"In no case may an amount be paid to an individual which would bring the total amount of bonus for him above the highest amount paid to any one person in the base period."

Dealer association wins merit award

◆ THE NATIONAL Appliance & Radio Dealers Association received an Award of Merit of the American Trade Association Executives at the ATAE annual meeting in Chicago.

The award was presented to A. W. Bernsohn, managing director of National Appliance & Radio Dealers Association, by Wesley Hardenbergh, president of the American Meat Institute and a past president of ATAE. A distinguished jury selected the award winners in the fifteenth year of this competition among the 1,100 members of the trade association group.

JACKSONVILLE DEALERS—Newly elected officers of the Jacksonville Appliance Dealers' Association are shown making plans for the coming year following their election at a recent meeting of the organization. From left to right are Harold Ashley, vice-president; Frank Smith, president; Rodman W. Shutt, executive secretary; and Ben Druse, secretary and treasurer. Members of the board of directors are Olin Wolfe, J. E. Herring, I. Greenberg, and W. R. Mabry. Twenty-three dealers and distributors were present at the meeting.

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- **Is keyed closely to state distribution of farm income...**
- **It takes your advertising message where the most dollars are...**
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Which means more sales for you... more and better advertising support for your distributors, wholesalers and retailers. Write, wire or phone for the number of Farm and Ranch-Southern Agriculturist subscribers in any Southern or Southwestern county. Compare these figures with those of the second farm publication—and you'll be convinced.

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703 Market St.
Douglas 2-4994

Promoting lower-priced appliances can keep volume up

Your salesmen will work harder, make more money, and have more fun.

by Baron Creager

IN WASHERS
IT'S BENDIX
3 TO 1
EVERYTIME
Here's your
KELVINATOR CONTEST
SELL and WIN
3 GETS YOU A SHIRT and TIE $5.00
6 GETS YOU A NEW HAT $10.00
9 GETS YOU A PAIR OF SHOES $12.50
15 GETS YOU A NEW SUMMER SUIT $50.00
18 GETS ALL OF THIS and A NEW SUIT FOR THE MRS. $50.00
SELL KELVINATOR THIS MONTH
WIN $30.00 for THE MRS.
BY MAKING YOUR
BENDIX QUOTA
FULL STEAM AHEAD

Vergal Bourland, right, head of Vergal Bourland Home Appliances, Ft. Worth, Texas, is now promoting and selling smaller-priced appliances that the company has been neglecting. "Very good experience," he tells L. E. Walters, manufacturer's zone manager, who congratulates him on the fine showing made by the company in one of their frequent contests.

◆ LATE IN JULY the combined three-store sales volume of Vergal Bourland Home Appliances in Fort Worth, Texas, was only 11 per cent off from last year as compared with much more substantial declines in sales reported generally by appliance dealers.

Furthermore, salesmen were working harder, making more money, and having more fun, says Bourland, and the reason for this happy condition — and a minimum in volume decline — is concentration of promotion on lower-priced items previously neglected.

However, if major - appliance sales constituted the volume picture in the three Bourland stores, it would be a slow-motion picture. In refrigerator sales, for example, Bourland volume is off about 40 per cent. The three stores moved 1,800 boxes last year, but will be satisfied with a thousand, even 900 sales, this year.

"So if we had depended upon major appliance sales," explains Bourland, "the over-all decline in business would be much worse than the actual 11 per cent it is.

"Through June of this year we sold more mixers at $39.95 than we sold in the two previous years put together. In the same six months this year we sold as many

sweepers as we did through all of 1950.

"It is the same story in table and portable radios. We sold as many the first six months this year as we did in 12 months last year. Previously, we had neglected these smaller-priced items, but this year we have put constant promotion behind them.

"We are generally in a healthier condition basically, with 1,200 more customers on the books than we had last year."

Special promotions

One special promotion featured a portable cooler at $50. This promotion stipulated that at that price there would be no delivery, installation, or service, but 850 coolers were sold.

Bourland took on lawn mowers, hand and power, and into July had sold 150. He pushed dinette sets and did well. Sets of china were shipped by the hundred.

By the end of the year three of Bourland's promotions will have attracted wide attention through the comic section of a Fort Worth Sunday paper.

The medium is a highly attractive and accurately colored advertisement picturing the item being pushed. This was arranged through a national promotion house.

Two of the advertisements featured mixers and china sets, respectively. The third, scheduled for December, offers an electric blanket at $29.95, and Bourland is confident this seasonal offer will bring another and bigger deluge of orders by mail and telephone than resulted from the first two color ads, which were extremely effective.

Bourland's three stores in Ft. Worth are strategically located.

Bourland points out that items selling for $50 or less do not come under restrictions of Regulation W, hence easier credit terms can be extended. This helped increase by 1,200 as his books show, the number of customers who bought from the firm this year compared with last year. And as of July, the books showed a total of 7,500 paying accounts.

The Vergal Bourland stores handle their own paper, and under Regulation W have fewer credit problems and less outstanding in accounts payable than before.

Bourland sincerely believes that Regulation W is a good thing, and that for the sake of a substantial national economy, some control should be exercised.

(Continued on page 137)

When Bourland participates in a merchandising show, he spreads a display such as this.

Contractors, builders, and architects will welcome a place to work out their kitchen problems.

How to capitalize on your model kitchen

by Rush Holton

♦ MODEL KITCHENS are no longer used solely for cooking schools by Sharpe-Wheyland, Inc., appliance retailers of Mobile, Ala. This company uses theirs for builders, architects, and contractors who bring in prospects to work out ideas for model-kitchen arrangements.

Not long ago, when Mobile began to experience a building boom which has resulted in thousands of people moving into the city, Ed Wheyland, partner in the firm, had an inspiration.

Most young couples who were building new homes, he found, were more highly concerned over the kitchen, its appearance, and functional efficiency, than any other room in the house. Why not, he asked himself, turn over the facilities of the model kitchen to prospective homeowners, architects, and builders, for use in working out plans?

The Alabama appliance dealer sounded out a few builders and contractors he knew, and found an eager interest displayed by each one. Many builders, unable to set up model homes for various reasons, were happy to accept the store's offer.

Within a few weeks, there was a steady infiltration into the store of prospective homeowners, usually accompanied by builders or architects. The builders and architects, too, began coming in on their own to use the model kitchen as a study for working out ideas.

They used not only the kitchen as it stood, but the miniature kits of appliances, walls, floors, and furniture which the company furnishes its salesmen.

Since that time the model kitchen has become a tremendously valuable sales tool, not only because it has sold many complete package kitchens to homeowners, but because it has brought the store a lot of big-ticket orders from apartment builders, hotel owners, and contractors.

Mr. Wheyland makes no restrictions on the manner in which his model kitchens are used. If the homeowner wants to install wooden cabinets, he may experiment with the Sharpe-Wheyland layout, use the miniature figures, and make his decision right there.

Invariably, however, the large percentage of young couples are exposed to the advantages of all-metal cabinets, cabinet sinks, matched appliances, and come around to the metal variety. Many prospective home-builders have been so impressed with the kitchen as is that they have simply ordered it duplicated in their homes.

News of this service has gotten around to the extent that there are many out-of-town visitors who are planning to move into the Mobile area who also enjoy the model-kitchen laboratory.

It has been amazing how many more sales have been derived from the model kitchen in this way, rather than from cooking schools, Mr. Wheyland said.

Results of system

"We are selling many times the number of appliances, sinks, and over-head cabinets that we did in the past," he said. "Our refrigerator volume, for example, went up to more than 500 units a year. Many of the sales could be traced to appreciation on the part of young couples who did their home planning in our kitchen.

"Not only that, we have been able to work closely with the factory, builders, and contractors, to take over major-scale appliance installations in apartment houses and housing projects. During 1950 we installed two separate orders calling for 244 refrigerators in one apartment building, 250 more in another, and 148 range-and-refrigerator combinations in

(Continued on page 135)

A bonus-book plan that reaches the prospects

A simple way to use your user without ringing her doorbell.

by John Greenway

◆ A SIMPLE PLAN for using the user without ringing doorbells and personally visiting every customer is getting record results at Smith Maytag Company, Hazard, Ky.

A. E. Smith, head of the firm, believes that pleased customers who will turn in the names of prospects are one of his most powerful merchandising assets. He has capitalized on a clever bonus-book system whereby all users of appliances sold by the firm are regularly contacted by mail.

The bonus books contain a series of coupons on which the user may write the name and address of any person they believe is a worth-while prospect for new appliances. The coupon is torn off, and sent in to the Smith Maytag Company. Here the prospect's name and address are taken off and turned over to salesmen. The coupon is then filed for reference.

Set bonus

A set bonus has been set up for all major appliances carried in stock. It may consist of either a cash payment if the co-operating user already has paid for her appliance, or credit on her own payments if she has not.

There are 20 coupons in each of the bonus books which offer incentive to the housewife to capitalize on her friends, Mr. Smith indicated.

The first books were sent out early in 1950. In the space of 30 days, 500 such mailings produced 120 prospects, of which approximately 50 per cent were sold. The original 500 mailing was continued to produce prospect listings at the rate of four or five per day, according to Mr. Smith, and sales are still developing.

This is by no means the first time a dealer in this area has offered rewards for the names of good prospects. But through the bonus books, the dealer recognizes the fact that most people are too busy or unwilling to write a letter or telephone the dealer when they bump into a likely prospect.

However, with the bonus coupon making it so easy, it is nothing unusual for the satisfied appliance owner to send in as many as 12 prospects a year.

In the letter which accompanies each bonus book, Mr. Smith explains carefully that he does not want "suspects" but rather bonafide "prospects." And most of his loyal users have cooperated by doing a little extra work to determine whether the prospect is ready to buy or not.

A. E. Smith
President
Smith Maytag Company
Hazard, Ky.

As a result, at least 90 per cent of the names which have come in via the bonus-book route may be classified as gilt-edge prospects. The Kentucky dealer is selling many suburban and rural families which he had no opportunity to contact before.

One of the firm's largest unit sales, incidentally, which involved five appliances plus a complete kitchen remodeling installation, developed from one of the bonus-book coupons, and was sold to a farmer who had never heard of the Smith Maytag Company.

You can make a profit on refrigerator rebuilding

This dealer disagrees with those who think that there are too many pitfalls in trade-in merchandising

by Robert A. Latimer

♦ TRADE-IN refrigerators, of any age or condition, can be profitable to the dealer if the proper reconditioning and selling program is developed for them according to Noel E. and Francis R. Lowther, partners who operate Arrow Appliance at 6208 Natural Bridge Rd., Pine Lawn, Mo.

Noel Lowther deplores the attitude of dealers who think that trade-ins are too much trouble or show too slim a profit margin to justify the effort.

He believes that without a thorough reconditioning department, the dealer has little opportunity to attract the limited-income customer who wants an allowance on his old box at all costs.

Therefore, the Arrow concern has developed a reconditioning program which makes it possible to accept old refrigerators in almost any condition and resell them profitably.

"The secret is being able to put any refrigerator in good condition by salvaging parts from other refrigerators, making our own parts in some instances, and transferring compressors of one kind into another cabinet," Noel Lowther stated.

"We have three experienced mechanics in our shop whom we can trust to convert almost any old box into a serviceable refrigerator, if given sufficient time and materials.

"In repairing something like 2,000 refrigerators, we seldom found a box which could not be used in some form or other. The most important thing is to see to it that the trade-in refrigerator is so well rebuilt, and in such good operating condition, that we can unhesitatingly guarantee it."

Paint jobs

Arrow, unlike many other dealerships, does not depend upon a good-looking paint job to make sales. Instead, the company actually paints only about half of the trade-ins received.

"We sell the mechanical quality and guarantee of the refrigerator, rather than the appearance," Lowther said. "We believe the customer who is buying a low-priced, rebuilt trade-in is more interested in the service it will give than the looks.

"Thus, we concentrate rebuilding expenditure entirely on the compressor, controls, evaporator, and cabinet hardware, rather than putting it into expensive but useless paint jobs.

"All of our refrigerators are sold with guarantees which run anywhere from 90 days to a year, and we can boast that many of our rebuilt boxes have been operating continuously in owners' homes for ten years or more."

Arrow maintains a $5,000 inventory of parts, including many parts for old refrigerators which have not been sold in the St. Louis area for a decade or more.

In the machine shop are drills, presses, lathes, cutters, etc., which make it possible to manufacture parts that cannot be found in the inventory or purchased from a distributor.

"The profit on each box is gauged by what allowance was made on it, amount of parts, and extra labor which went into reconditioning," Lowther said.

"We keep a precise record of

the costs which went into every box, and add a fair markup to this when the refrigerator has passed through a one-week test period, and a guarantee has been established.

Markup

"In many instances where the box came in with an extremely low trade-in allowance, the markup is much larger. We pick up many refrigerators at $5 or $10 which can be reconditioned for $20 or $25 but sell at $75 or $80.

"The spread, here, is more than enough to offset expensive reconditioning jobs which bring about the same price on the retail market."

Prices in the Arrow showroom, which normally shows six or eight used boxes along with new refrigerators, range for the most part between $75 and $100 — seldom dipping below the $75 minimum.

By far the most important contribution to steady earnings through reconditioning is the ability to transpose units to make serviceable refrigerators out of what at first glance may seem fit only for the trashpile.

For example, Lowther pointed out an old box which had not run for several years when Arrow took it in trade. Accepting it made possible the sale of a $359 new refrigerator. While the compressor was frozen tight and worn out, the cabinet was in excellent condition, without scratches or burrs.

"To make this a saleable box, we merely installed a 1949 compressor, plus controls," Lowther said. "We checked it for 12 hours, found its operation perfect, and easily sold the box for $85."

The Lowther brothers believe that salesmen should be trained to buy and sell trade-ins as easily as new boxes. Therefore each man spends part of his time actually rebuilding, painting, and testing trade-ins in the shop. In this way he gets a thorough knowledge of costs, the amount of labor required, and other considerations involved. He can then estimate far more accurately.

Commission

As the clincher, Arrow allows each man a 10 per cent commission on every box sold at a profit.

The Arrow concern, located in the center of one of suburban St. Louis' busiest shopping centers, has been handling trade-in refrigerators consistently since 1931. In that time, the firm has sold many hundreds of boxes, re-

(Continued on page 134)

Efficient refrigerator repair shops should have a place for every piece of equipment and plenty of room in which to move the appliances for repairs. Rebuilt refrigerators can be displayed to good advantage with new ones.

J. M. (Zip) Taylor and Loyd Davis, dealers and contractors in Irving, Texas, tell why they wouldn't trade their modest business.

Merchandising in the small community

If you satisfy your friends and all the people you know in a town of 3,200, you're doing a good job.

◆ OUTSTANDING POLICY and performance in service and the normal amount of courtesy in dealing with people are the most effective tools for producing appliance business in the community of modest size, according to the experience of Loyd Davis.

For the past five years Davis and his son-in-law, J. M. (Zip) Taylor, have been partners in business in Irving, Texas, and although there are four service men either part- or full-time, there are no salesmen, for in the matter of moving merchandise this is a one-man establishment and Loyd Davis is that man.

"Salesmen?" he echoed. "No, thanks. No more salesmen for me." Then he modified that position.

"Not the kind of salesmen I have had experience with, anyhow," he continued. "Oh, I would hire a couple of good men if I could find the right men. But the salesmen I have had almost invariably gave away my profit on the trade-in. They were not interested in continuation of this business nearly as much as they were in the next commission check.

"So now I am the sales manager, sales force and, what is more important, I make all appraisals when there is a trade. It seems to me that is the best policy when a dealer doesn't have enough volume to justify a supervisor."

Davis has demonstrated there is no invention more productive of sales than using the user. To be effective, however, he points out that this requires service men who are both alert and talented, with courtesy, combined with a store policy that establishes and maintains pleasant relations with all customers.

However, store personnel is not as lop-sided with service talent as mention of a four-man staff might indicate.

There is a substantial amount of contract wiring which is supervised by Taylor. He has the assistance of two men who devote 85 per cent of their time to this department, the rest to service work.

Taylor himself also handles all washing machine service. The fourth man devotes all of his time to outside and inside service, on television, radios, and small appliances left at the store.

User contacts

But the contacts of these four with users is extensive enough to account for 75 to 80 per cent of appliance volume being placed in Irving. The other 20 or 25 per cent goes to nearby Dallas.

Geography is important to the operation of the Davis-Taylor business, for from the heart of Irving to the heart of Dallas the distance is slightly less than 11 miles. Irving has a city-limit population of about 3,200, with 4,500 within a radius of five miles, and that is generally considered

(Continued on page 133)

We must keep our salesman's confidence

by George S. Gardiner
President,
Modern Appliance Company
Baltimore, Md.

Co-operation of every salesman on the payroll will enable dealers to cope with present market conditions.

♦ To my mind, no appliance dealer today is going to be able to cope with present market conditions without the complete, 100 per cent co-operation of every salesman on his payroll.

Dealers hustling to make sales, to reach quotas, or to unload mistakenly purchased heavy inventories are quite likely to forget the salesman's angle. The result is that when he needs them most, he is likely to find his salesmen drifting away to greener pastures.

Respect for the boss

We all recognize the fact that an appliance salesman, before he can earn a dollar for us, must likewise earn a dollar for himself. Therefore, anything which tends to create a wholesome respect for the boss will lead to better profits for all concerned.

We operate a larger-than-average appliance store, with a staff of six regular salesmen who may be considered both inside and outside workers inasmuch as a definite percentage of weekly time is allotted to each.

All of our men are veteran, skilled appliance salesmen who know customer psychology as well as they do the appliances, and who can be depended upon to stay on the payroll.

Their incomes are good, they know that they are protected against split commissions, foundered sales, and other such depressing occurrences.

I call all of my salesmen by their first names, expect them to use the same informality with me, and I see to it that each man's row is as easy to hoe as I can personally make it.

One way by which we keep our salesmen satisfied is our protection card system. Nothing breeds discontent or resignation more rapidly than for one salesman to find that another is entitled to part of his commission on a sale.

We decided years ago that every prospect is owned by the salesman who made the original contact, until a reasonable length of time and a reasonable amount of energy have been expanded on selling him.

Therefore, whenever a salesman finds a prospect — who may have been a floor visitor, a name turned in by a previously sold customer, or a housewife whom he has contacted at the doorstep —a protection card is made out.

On this card are listed the prospect's name and address, the date contacted, the appliance in which the prospect is interested, details on any possible trade-ins, financial situation, brand preference, etc.

I insist that all these cards be turned in to a file which I myself maintain. At the end of each day, I go over this file, examining the protection cards of each salesman, thus keeping a finger on their operations.

As soon as a sale is completed, of course, the salesman involved informs me, and the protection card is removed from the file. If the salesman is having difficulty in making a sale, it will show up in the fact that the card is still there.

If the card bears no new entries over a period of a few days, I believe that it is time to call the salesman in and find out what the story is with that particular prospect.

Purpose of protection file

We do not, of course, use the protection file as a slave-driving system, but merely to be sure that the salesman is constantly reminded of the prospects he must contact, and to prevent the work of one man paying off as a commission for another.

The length of time each protection card is held for a salesman

(Continued on page 134)

This dealer showed a gross profit of 34 per cent in 1950 without price-cutting of any sort.

Is price-cutting necessary?

by R. A. Snook
President
Snook Brothers
Charlotte, N. C.

◆ IN MANY INSTANCES we have found that the appliance dealer who indulges in such practices as excessively large allowances on trade-ins, give-away premiums with new appliance sales, and other schemes which reduce his profit per sale, will find that even increased volume will not compensate for the loss in profit per sale.

At our store, the largest in Charlotte, and one of the oldest in the area, we are proud of the fact that we have never cut a price in any way, nor utilized any special inducements involving give-aways.

At the same time, during 1950, we showed a clean gross profit of 34 per cent, a net profit remaining before income taxes of 11.1 per cent.

Sales volume

Our sales volume during the same period was split up among major appliances, contributing 60 per cent, radio and television 23 per cent, electric housewares 1½ per cent, records 2½ per cent, and resale of trade-ins 3 per cent. The service department contributed 8½ per cent of the total sales volume.

We believe that these figures prove conclusively that it is better to sell a smaller unit volume and retain a full profit, than to double or even triple total volume with a thinly spread profit over all.

How did we accomplish our volume without such cuts? The secret, if any secret exists, lies in good, effective advertising, the constant playing up of the firm's prestige, plus reliable brands, dependable service, and a well-budgeted promotional program.

We have set up a yearly selling plan, whereby our direct selling expense is budgeted at 8.1 per cent, including such items as advertising at 2½ per cent, sales promotion ½ of 1 per cent, salaries 3 per cent, and sales commission 2.1 per cent.

Our advertising, we believe, is of unique effect, because all of it is concentrated on selling Snook's to the public rather than on individual appliances. We started out several years ago to promote the name rather than the price in such a way that all local residents automatically think of Snook's whenever the subject of appliances comes up.

In order to make our store name well - known, emphasizing our long service to the community and well-known lines, we developed a distinctive advertising signature.

This signature cut is used on all Snook correspondences, our television program, all of our building signs, the sides of trucks, letterheads, billheads, and all direct mail. We use the signature so that at a glance most people recognize it, and our slogan, which is "Charlotte's largest appliance store." We duplicate the signature cut on the back of all our employees' uniforms, and on their tool boxes and trucks.

Use of signature cut

When we first adopted this signature cut, we began to use it with plenty of white space in each ad, to carry a certain amount of prestige and dignity, which the jammed newspaper ad, full of items, cannot create.

We budgeted 8 per cent of our sales volume when the program began, primarily to promote the easily recognized trademark. Our signature, of a size in keeping with whatever advertising is being used, always appears on the top left-hand side of every ad, and duplicated again at the bottom right-side.

We very seldom use less than

(Continued on page 135)

HOW TO CUT DOWN ON TV SERVICE CALLS

Informative letter to contract holder lists ways to get his set back in operation.

by Allen Mason

♦ AN EFFECTIVE means by which the radio-television retailer may cut down on the volume of television service calls is the informative letter which has been developed by Harold Weinberger, head of Weinberger Electric Company, in Nashville, Tenn.

Weinberger Electric, like many other television retailers, has found that the problem of service is by far the most serious in successful retailing.

Because sets are sometimes received improperly adjusted from manufacturers, the company first checks every set thoroughly over a 48-hour test period before it is considered saleable.

But even this test period is not sufficient to guarantee that the set will not suddenly go out of service, develop fuzzy images, or give other trouble within a matter of days after installation.

Service contract

To protect the customer, Weinberger has been forced to develop a service contract, whereby the customer pays a set amount for guaranteed service over the first six months or one year, following expiration of the set guarantee.

Even these methods, however, have not been sufficient to overcome the dissatisfaction which naturally arises when a video-set owner telephones in for service and finds that it requires two or three days before busy servicemen can get around to him.

To cut down on the heavy flow of service calls, Mr. Weinberger hit upon a practical solution with a "do-it-yourself" informative letter. The letter is sent out to every customer using a Weinberger-sold television set, and it lists several steps which the homeowner may take to get his set back in operation, if the trouble can be traced to some simple disconnection or error in installation.

Typed on a Weinberger Electric Company letterhead, the letter begins:

"We have been pleased to serve you under our contract. Television is new in Nashville, and we find that we are receiving calls due to conditions which we list below, which were not anticipated in our service contracts. We suggest that before you call us for service, you determine if your trouble is caused by any of the following conditions:

"(1) Set not plugged into a-c line.

"(2) House fuse burned out in a-c line.

"(3) Antenna leads not connected to set.

"(4) Switch not set on TV.

"(5) Poor reception due to fault at TV transmitter.

"(6) Picture out of linearity due to owner attempting to readjust rear controls.

"(7) Fuzzy or not-clear picture due to smoke or dust on face of picture tube or front glass.

"(8) Antenna leads or a-c line cord damaged due to mishandling.

"(9) In case of TV-AM-FM record player combinations, switch not set in desired position.

"(10) Local interference, such as electric stokers, appliances, etc.

"Should we receive calls, and it is determined that the trouble is the result of any of the above causes, of course we will have to charge for the service at the sum of $5.50. For instance, it was never anticipated that we should have to come out and plug in your connections. These are things that you can check yourself. We certainly appreciate your business and continued patronage."

Service calls began dropping off immediately after the first mailing, a few months ago, according to Mr. Weinberger, and have continued to decrease every month since.

Customer satisfaction

"We believe that the letter is one of the most important steps we have taken toward creating customer satisfaction," he said. "For, not only does the letter help customers to correct minor deficiencies in their sets at home, but by reading it over, the own-

(Continued on page 134)

Retail sales outpacing production; further cutbacks in materials

Fourth quarter prospects, 1951

◆ PRESENT INDICATIONS are that dealer sales of well-established brands of major household appliances will outpace production by the fourth quarter of 1951, assuring full profits for those retailers who continue sales programs on a sound, aggressive basis, James J. Nance, president of Hotpoint, Inc., speaking of the appliance industry generally, said.

Mr. Nance said that while electric appliances shared in the $17 billion rise in inventories of all finished consumer goods in the first half of this year, "it is safe to assert that retail sales are beginning to outpace production."

He said that further cutbacks in materials for civilian goods are definitely in prospect. Against this dwindling supply is the fact that many women are going back into defense plants, bringing a further rise in the need for electric aids to operate their homes on crowded schedules.

Bulk of business

In a report on the outlook for the industry, Nance noted that previous to World War II, appliance dealers were getting the bulk of their business from refrigerators and wringer washing machines.

The sharp impact of women in war work made the household servant obsolete, just as the hired hand became obsolete as a result of farm mechanization.

This condition brought sudden acceptance for new work-saving appliances in the home, specifically automatic dishwashers, tumbler clothes dryers, automatic washing machines, electric water heaters, and electric ranges operated by pushbuttons and other automatic devices.

The trend of kitchen mechanization is evidenced by the fact that the number of families using automatic dishwashers passed the one million mark in mid-1951, which is recognized as the mark of public acceptance for a major appliance. Nance said that "this was the biggest news in the industry this year."

From the retailer's point of view, the most significant trend in the appliance business is that dealers are selling matched complete kitchens and home laundries, much as bathrooms were sold when fixtures were introduced as matched groups 30 years ago.

These complete groups have become a new industry. Today a retailer can sell a matched group that represents a big-ticket sale with a retail value equal to that of a high-priced automobile.

Nance said that following Korea, the public did a considerable amount of forward buying in the belief that manufacturers would not be able to produce civilian goods if the internal situation grew worse.

A result was that some manufacturers produced more than necessary in the fear that materials would be sharply curtailed. Most of the appliances making up a complete kitchen and home laundry are not and never have been produced equal to the demand.

For example, he said, in checking Hotpoint's dealer inventories recently, it was found that the average dealer had 1.9 dishwashers in stock. Many dealers sell two or more of these units weekly. He said this is fairly typical of the supply situation on all of the newer appliances with growing demand.

An up-to-date industry-wide study of projected production and sales made by Hotpoint's market research department points up that retail sales will outpace factory production in the fourth quarter of 1951, he said.

Appliances studied

Automatic dishwashers, electric ranges, electric water heaters, home freezers, and automatic washers, appliances with relatively low saturation and growing demand, were used in the study.

The $17 billion rise in finished-goods inventories in the first half of 1951 reflected lagging consumer buying after an upsurge in "scarce" purchases, together with accelerated production in some lines, despite talk of radical cutbacks due to materials restrictions.

Nance said that while it is difficult to set an arbitrary level at which inventories can be considered normal at this time, few retailers should have any real inventory problem during the remainder of 1951. He added that present indications are that an actual shortage of good brands of appliances is possible after the first of the year.

Retail prices of leading appli-

(Continued on page 134)

Product Parade

CBS-Columbia TV models

TWO NEW television models have been announced by CBS-Columbia Inc., 170 53rd St., Brooklyn 32, N. Y., formerly Air King Products Co., Inc., now the manufacturing subsidiary of the Columbia Broadcasting System.

These two models, which are the first to be introduced since Air King merged with the Columbia Broadcasting System, are both 20-inch receivers.

The first, a mahogany table model known as Model 20T1, will carry a list price of $299.95. The second, a French Provincial console in maple, Model 20C3, will carry a retail price of $469.95.

•

Gibson home freezers

THE Gibson Refrigerator Co., Greenville, Mich., is previewing a new line of home freezers in sizes to meet every family size.

Of particular interest to the average family is the new Model HF-1391. This new streamlined model provides 13 cubic feet of storage in the space formerly required for the 10-cubic-foot models.

A special feature of the new freezer is its separate quick-freeze compartment which provides super-fast freezing down to 10 degrees below zero. The housewife can quickly freeze up to 102 pounds of meat, poultry, fish, fruits, and vegetables in the freezing compartment.

The balance of the cabinet provides 10.13 cubic feet of frozen food storage for up to 354 pounds of food.

Other interesting features of the new Gibson freezer include the full-width counterbalanced lid which raises or lowers at the touch of the finger, automatic interior light, single-dial temperature control, and movable baskets in the storage section which provide easy accessibility and efficient arrangement of the stored food.

Owners of the Gibson HF-1391 are guaranteed against loss due to mechanical failure by the Gibson five-year $150 food-protection plan. This is in addition to the five-year service warranty.

•

Lamp catalog

TWENTY-TWO NEWLY designed lamps, products of the portable specialities division of the Mitchell Manufacturing Co., 2525 No. Clybourn Ave., Chicago 14, Ill., are described and pictured, with specifications, in a two-color catalog, No. 434, recently issued by the company.

These lamps comprise Mitchell's "Giftline" series, which includes scientifically designed television lamps, desk lamps, which are suitable in the home and office, versatile pin-up lamps, bed lamps, radio lamps, floor lamps, and lamps designed especially for children's rooms.

•

Regina advertising

UTILIZING THE theme "A Lifetime of Beautiful Floors," the Regina Corp., Rahway, N. J., in its consumer advertising this fall on the new Model S Regina twin-brush polisher and scrubber, is also illustrating an early Regina polisher said to be still rendering efficient service after more than 20 years of constant use.

Regina's extensive advertising on the new model polisher began in September and will run through November. Large-space color and black-and-white ads will appear in mass, class, and farm publications, totaling nine in number.

The consumer advertising theme is carried out in the array of dealer help material that Regina is offering the trade.

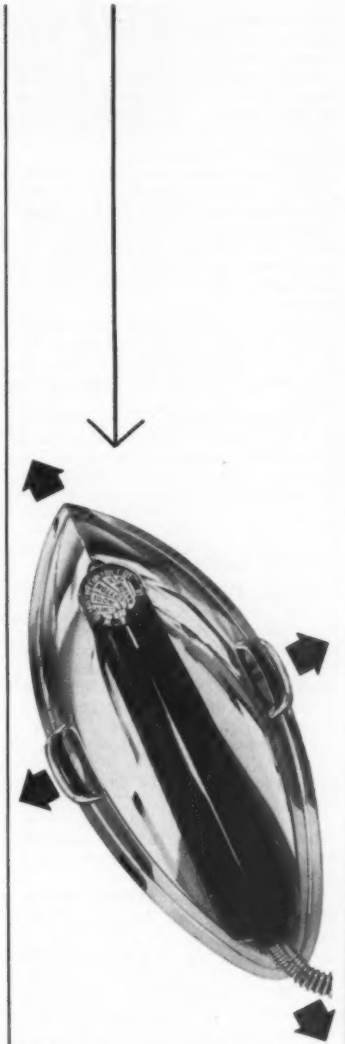
•

Automatic blanket

A DELUXE General Electric automatic blanket with a newly designed functional bedside control has been announced by the company's automatic blanket division, 1285 Boston Ave., Bridgeport 2, Conn.

The new control is vertical in design and is as easy to read and adjust as a luminous alarm clock. It has an illuminated dial which lights up when the current is on and is clearly visible in the dark.

The control, which is ivory and gold in color, regulates the selected degree of warmth and automatically compen-



sates for normal changes in room temperature to provide the same desired warmth at all times.

If a potential overheat condition should develop due to disarrangement of the blanket, the control automatically turns off to prevent a build-up of excessive temperatures.

The new deluxe line consists of two models—a double-bed one-control and a twin-bed one-control blanket. These models complement the standard line of G. E. blankets which consists of double-bed two-control, double-bed one-control, and twin-bed one-control models.

Four new colors have been added to the line with the introduction of the deluxe blankets. They are camellia red, bluebonnet, ash rose, and glade green.

The deluxe blankets will be packaged in a new showcase carton which has a "visualizer" cellophane window so that the box serves as a display unit as well as an attractive gift package.

●

Admiral radio and TV

ADMIRAL Corporation has announced 11 new radio and television models, sets "built for the future" with color television optional and equipped for UHF, with emphasis on sharply reduced prices. The Admiral UHF strip, snapped into the turret tuner, becomes an integral part of the set.

Two points were high-lighted:

(1) The Admiral color adapter for color television, with its three-position switch.

(2) The Admiral "companion" or "slave" set, to receive color telecasts when plugged into a black-and-white Admiral set.

The Admiral color adapter, with its three-position switch, does the following:

Position 1: Receives black-and-white programs in the usual way, full screen.

Position 2: Adapts set to receive color programs in black-and-white, full screen.

Position 3: Reduces picture size of Position 2 to that of a 10-inch tube for conversion to color by means of a color wheel.

Admiral stated that its models, like all Admiral sets, are engineered for the future, to provide excellent black-and-white reception, to provide color telecasts in black-and-white or color telecasts in color at the flick of a switch; and further to provide large-screen black-and-white sets to which color reception can be added at any time for those who wish to wait until color television can catch up with black-and-white television in programming, picture size, and economy.

●

Open-handle iron

AN OPEN-HANDLE iron that brings a new ease to the task of hand ironing has been introduced by the Westinghouse electric appliance division.

The front of the handle is open instead of closed as in conventional types of hand irons. The open-front treatment permits a striking new styling of the traditional iron.

The design of the handle was based on a study of where muscle strain and fatigue began to be felt in the work of ironing.

The new iron handle is cooler to use because there is nothing to carry the heat directly up from the hot part of the iron to the front of the handle.

The open-handle iron slips into pockets, pleats, and sleeves because the upper part of the garment material slides through the handle opening. This ironing action eliminates, in many cases, the need to turn garments inside out to iron pockets, sleeves, or pleats.

A button-edge extends all around the iron so that a single stroke, for example, irons under two shirt buttons and the material between.

A newly designed fabric temperature control that the user can feel click into position for any one of the seven fabric settings was developed for the iron.

There are three heat positions for rayons and other synthetic fabrics, a wool, a cotton, and a linen heat position and a special "high" position for very heavy linens. In addition, the control knob may be moved to intermediate positions to meet individual requirements of users.

A 7-foot cord is side-mounted to the iron handle, which is a black phenolic plastic. The iron weighs 4 pounds and will operate only on alternating current.

●

New Lectric Cook

INTRODUCTION OF a streamlined and redesigned Arvin Lectric Cook has been announced by the electric housewares division of Arvin Industries, Inc., Columbus, Ind.

By rounding off all exterior surfaces and edges, Arvin designers have streamlined the appearance of the

product, and at the same time conveyed a visual effect of lower height.

The full base on the older model has been replaced by "pontoon"-type feet on two sides and elbow-shaped rests front and back in brown plastic.

While apparently more compact, the new model bearing Number 3550, is of the same large capacity with 190 square inches of cooking surface, an area, when opened flat, equal to that of three 10-inch skillets. Closed, the Lectric Cook is 12 inches square and 4 inches high.

Used as a Cook, the product grills, fries, and toasts, and quickly converts to a fully automatic waffle baker with insertion of four aluminum waffle grids. All other features of the former model, including signal light, drip spouts, enclosed expanding hinge that permits grilling thick cuts of meat on both sides at once, and handy sandwich spacers, are continued in the new model.

The appliance operates on a-c only, 110-120 volts, 1320 watts. It is guaranteed for one year and listed by Underwriters' Laboratories, Inc.

The new model 3550 is being marketed at the same price carried by the former model and is designed to retail at $29.95 complete with removable waffle grids. Arvin's 40 per cent dealer discount applies to the new product.

●

New Allied catalog

THE PUBLICATION of a new 1952, 212-page catalog, "Everything in Radio, Television, and Industrial Electronics," has been announced by Allied Radio Corp.

Special emphasis has been placed on equipment for industrial maintenance, research, and production requirements. There are detailed listings of standard and special-purpose electronic tubes, test instruments, voltage stabilizers, transformers, resistors, capacitors, rheostats, relays, switches, rectifiers, tools, wire and cable, batteries, sockets, generators, power supplies, and a wide variety of other electronic equipment and components.

A large technical book section includes leading publications covering the theoretical and practical aspects of radio, electronics, and electricity.

Other listings include: fluorescent lighting units; lamps and accessories; communications-type receivers; photoelectric cell equipment; phonographs and all accessories; Allied's new line of Knight radio sets; new television chassis for fringe areas; and a complete line of TV boosters, aerials, picture and receiving tubes, and other TV accessories.

This new 1952 buying guide is available without charge from Allied Radio Corp., 833 W. Jackson Blvd., Chicago 7, Ill.

●

Philco TV and radio

TWENTY-EIGHT 1952 TV receivers and 27 radio models have been introduced recently by Philco Corp., Philadelphia.

The new television receivers range in price, including tax, from $199.95 to $800, and typical of the values are the 1839 open-face 17-inch console at $299.95 and 1842 deluxe designed mahogany open-face 17-inch console complete with correct-angle viewing casters at $349.95.

Some of the headline features include ultra-sensitive Colorado Tuner; new cabinet designs and materials; special deflection yoke and circuits; and an illuminated channel selector and built-in casters for easy moving and correct angle viewing.

Sixteen of the 26 new models are 17-inch table and console models ranging from $259.95 for a table model to $489.95 for a striped African mahogany three-way combination console.

Prices of the 20-inch receivers range from $359.95 for a table model to $800 for the three-way combination with full, complete remote control.

In addition, Philco presented two new 16-inch table models, the 1610 and 1612. Both models contain all Philco big-screen features including the custom-built chassis, balanced beam, Philco highly sensitive tuner, and easily accessible controls.

The 27 radio models include features such as the "Tube-Saver," which ends power surges and early tube burn-out by limiting the amount of current drawn through tube filaments when the a-c and d-c radio is first turned on; the new Magnecor loop aerial which produces uniform sensitivity across the dial; improved speakers which give rich bass and unusual treble; plus newly designed gleaming plastic cabinets in soft pastel shades.

A price value is the 540-E in shiny Ebony finish at $19.95. Included in the clock radio bracket is Model 544-E at the new low price of $37.50. Three portable models are headed by the 643 at $49.95.

●

Infra-red broiler

A NEW INFRA-RED broiler that provides charcoal broiling with sunshine infra-red health rays has been announced by Prevore Electric Mfg. Corp., Prevore Bldg., Brooklyn 16, N. Y.

Dimensions are 10¾ inches long and 6¼ inches low. The broiler is easily portable and easily stored, and can be used right on the table. The air-cooled handle on the plated broil-rack folds in out of the way when not in use.

Two broiling positions, separate drip pan, two heats, and two-year guarantee from electrical or functional defects, except cord and plug, are a few of the features of this new broiler.

●

TV converters

INTRODUCTION OF the Du Matic switch, a color television adapter which will make it possible for viewers to see every type color transmission available today, in black and white, on their present sets, has been announced by Allen B. Du Mont Laboratories, Inc.

Simultaneously Du Mont introduced an ultra high frequency converter which will permit owners of any present standard VHF set to receive ultimate commercial UHF telecasting. The converter offers continuous tuning, and covers a range of 475-890 megacycles, those frequencies set aside for future commercial UHF broadcasting.

The Du Matic switch, 4½ inches long, 3 inches wide, and 1½ inches deep, can be installed on the rear of the set, bolted to the chassis. The switch enables the set owners to change from regular 525-line reception to the 405 lines employed by the CBS system, to get color pictures in black and white, whenever the 405-line color system is on the air.

The Du Matic will sell well under $20 and can be installed by a local serviceman in an hour.

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Silent Salesmen

Westinghouse — Frost-free display

RETAIL SALESMEN can now use a full-color flasher display to explain the Westinghouse Frost-Free automatic defrosting system to customers.

The display, one of a series offered in the company's year-long package display service to more than 4,500 dealers, can be operated manually for a step-by-step explanation or automatically for showroom or window display.

Retail salesmen can now use this full-color flasher display to explain the Westinghouse Frost-Free automatic defrosting system.

After 60 door-openings, the Frost-Free counter button sends a signal which starts a completely automatic defrosting cycle. The same refrigerant that has been doing the cooling job now does the defrosting job. It follows the same path through the coils surrounding the freeze chest that it takes when it is cooling, only now it is warmed.

This warmed refrigerant passing through the coils quickly melts off the slight film of frost that has begun to form. The defrost water is then carried through a tube down to the unit compartment at the bottom where it is automatically evaporated.

General Electric — Point-of-sale displays

A SERIES OF easy-to-read, point-of-sale displays, ready to be attached to refrigerators and freezers and providing a ready-made sales talk right on the appliances, has been made available to distributors and dealers by the General Electric Co., Bridgeport 2, Conn.

Called "Featurettes," the five colorful, plastic sheets are printed on both sides with information on all features of the company's 1951 refrigerator and freezer models. The sheets will stick to appliances without glue or tape, are washable and easily removable and can be used over and over again.

Also included in the display kit are seals featuring the G. E. monogram and dependability seal and price stickers accompanied by "special" pencil. The price stickers are also reuseable. The "Featurettes" display is priced at $2.50.

Eureka— Advertising campaign

LAUNCHING OF A new Eureka vacuum cleaner national advertising campaign to back an established series of co-operative ads run by dealers throughout the country in their local newspapers has been announced by the Eureka Division, Eureka Williams Corp.

The new advertisements feature the Eureka Automatic "3 in 1" Wonder Cleaner, and will appear in such magazines as *Life*, *The Saturday Evening Post*, and *Ladies' Home Journal*.

Eureka vacuum cleaner's national advertising campaign features ads such as this one with the free-trial coupon at the top. The ad goes on to describe the three separate cleaning devices.

An unusual aspect of the ads is the placing of a free trial coupon boldly at the top in the place of the traditional headline. The copy then goes on to explain briefly beneath illustrations the three separate cleaning devices from which the cleaner derived its name.

While concentrating primarily on the retail approach for the cleaner itself, another unusual feature of the ad is its institutional ending—a panel with small illustrations and concise explanations of the other products manufactured by the Eureka Williams Corp. These products are automatic heating equipment and waste food disposers.

Noma Electric — Christmas package

A NEW full-color merchandising display package, designed to centralize the sale of Christmas lights in one area of a store, has been announced by Noma Electric Corp., 55 W. 13th St., New York 11, N. Y.

Noma's new Christmas lights display is a real shopper-stopper when fully illuminated.

The display is illuminated and in full color. It is 43 inches high, 32 inches wide, and 9 inches deep. Featured is Noma's new safety fuse plug on all multiple-burning sets. Floor, counter, and window use is suggested.

Universal — Coffeematic display

TO FURTHER promote the Coffeematic coffeemaker, Universal is offering a beautiful full-color point-of-sale display with every three Coffeematics purchased by the dealer. The display is a reproduction of a silver coffee tray with a maroon scroll background, and comes complete with a cup, saucer, and napkin. It is large enough to hold one Coffeematic, yet compact enough to take up little space on a dealer's counter or service shelf.

News Roundup

Timely items relating to dealers, light and power company sales departments, electrical wholesalers, manufacturers and their agents.

♦ TWENTY distributor sales promotion managers have qualified for prizes in a continuing program conducted by Hotpoint Inc., to stimulate aggressive retail selling. Of the 20 managers so honored, nine are associated with southern electrical distributing firms. The prize winners included: W. T. McGlathery, Graybar Electric Co., Birmingham; J. H. Chapman, Jr., Graybar, Columbia, S. C.; G. Bailey, Wheeling Kitchen Equipment Co., Wheeling, W. Va.; M. Paulsen, Graybar, Kansas City; J. L. Ringwalt, Graybar, Tulsa; U. Skipper, Graybar, Houston; L. M. Stratton III, Stratton-Warren Hardware Co., Memphis; B. M. Arnett, Gorman Engineering Co., El Paso; and J. R. Duffy, Graybar, Louisville.

♦ GENERAL Salary Stabilization Regulation 3 has just been issued by the Salary Stabilization Board, which sets forth the procedure by which employers may make individual salary adjustments for employees, within certain specified limits without approval by the Board.

♦ A FIVE-YEAR protection plan on the sealed mechanisms of its spinner washers has been put into effect by Thor Corp.

The company announced also that it expects to institute a similar program for the mechanisms of its wringer washing machines "within a few days."

M. R. Wilson, Thor's general sales manager, said the five-year protection plan includes the regular one-year factory guarantee, plus an additional 4-year warranty on the mechanism.

The latter warranty is optional. If the purchaser wants it, she'll pay an additional $3. If at any time during the first year or the extended 4-year period the mechanism fails, Thor Corp., through its authorized service organization, will repair or replace it at no charge for parts or labor.

♦ NASHVILLE appliance dealers have learned that summer cooling appliances can represent a big and profitable share of their hot weather business. Window fans have broken all records for sales in this area, while attic fans and air conditioning units have sold in greater volume than ever before.

Contributing to the successful fan sales season was the special Summer Cooling Promotion sponsored by the Nashville Electric Service, the local electric power board, which included a direct mail bill stuffer to each of 90,000 electric customers, radio spots on local stations, and a series of newspaper advertisements.

Sales reported by Nashville distributors and dealers for the period May 1 to August 31st included 9,289 window fans, 1,931 air conditioning units, and 806 attic ventilating fans.

♦ FACTORY SALES of standard size household washers in August totaled 239,081 units, an advance of 71 per cent over 139,799 in July and down 37.3 per cent from sales of 381,452 washers in August, 1950, according to industry-wide figures announced by the American Home Laundry Manufacturers' Association.

Sales of automatic dryers in August were up 53 per cent over July, aggregating 40,191 units compared to 26,268 dryers, and compared to 32,318 units in August, 1950, a gain of 24.4 per cent.

Factory sales of ironers in August were 17,200 units, up 55 per cent from 11,100 sold in July and a drop of 59.7 per cent from 42,700 sold in August a year ago.

♦ THE BIGGEST sales campaign in the history of the General Electric Major Appliance Division has been launched by the company and its 60 major appliance distributors.

ONE-MAN OPERATION—A. W. Parrish, right, of Aylett, Va., won fourth prize, a check for $750 in Hotpoint's nation-wide refrigerator sales contest. He attained 1100 per cent of his quota, without salesmen, making all sales himself. How was it done? "The set-up was simple," Mr. Parrish reports. "I put a refrigerator in the back of my jeep, back it up to a potential customer's door, and then do an old-fashioned peddlers' job of selling!" Calvin D. Smith, left, district manager of G. E. Supply Co., Richmond, presented the prize check to Mr. Parrish.

ATLANTA TEAM—Fred Dendy, Sr., right, president of Electrical Wholesalers, Inc., explains features of Sylvania's new "HaloLight" picture control to Fred Dendy, Jr., vice-president of the distributing firm. The company recently held a two-day showing of the new models for Georgia dealers.

Over 1000 of the Company's dealers and distributor salesmen will have an opportunity to win expense-paid holidays in New York or San Francisco for their sales achievements during the period between September 1 and November 30.

The trips will be awarded for best balanced sales performances. In order to qualify, distributors and retailers must accomplish a realization of quota on a majority of the Company's major appliance lines.

Called the "Road Race Jamboree," the campaign will be run in two sections—for distributors and dealers east of the Mississippi River and for those west of the River. Each distributor will be assigned an ancient automobile, which will run in simulated races between New York and San Francisco.

◆ A THIRTY-DAY money-back guarantee to purchasers of the company's Frost-Free line of refrigerators has been announced by George H. Meilinger, sales manager of the household refrigeration department, Westinghouse Electric Appliance Division.

"Recent advertising claims," Mr. Meilinger pointed out, "have left the consumer confused as to what is automatic defrosting. The money-back guarantee is given as further proof to the user that the Frost-Free system will give the housewife all the benefits of automatic defrosting claimed for it.

"The offer is very simple," Meilinger explained. "The dealer sells, delivers, and installs a Frost-Free model in the customer's home and if, within 30 days, she is not completely satisfied, the dealer will take it back and refund the full purchase price."

◆ THE APPLIANCE business must immediately cultivate new markets if it is to realize a volume business, Walter J. Daily, vice-president of the vacuum cleaner division of Lewyt Corp., told southern dealers at a regional meeting in Atlanta. He told the dealers that cultivation of this market "means advertising."

Other speakers on the program included Donald B. Smith, director of advertising and sales promotion. He said the company's advertising budget this fall and winter would be about $800,000.

Of special interest to dealers is the company's "two-for-one" billboard poster program. For a two-month billboard program Lewyt offers dealers one month of posting absolutely free when they buy the second month on Lewyt's regular 50-50 co-operative plan.

◆ THE NUNN ELECTRIC Supply Corporation, of Amarillo and Lubbock, Tex., has been appointed wholesale distributor of International Harvester Company's refrigerators and freezers, reports J. H. Yeary, manager of the IH district office in Amarillo.

The 25-year-old firm is headed by Carl Hare, of Amarillo, as president, and James Reed is branch manager in that city. The distributor also has a branch in Lubbock, Tex., which is managed by George Howell and Bill Honey.

◆ A NEW 20-page "How-To" Merchandiser, showing dealers the way to sell more electric housewares as gifts during fall and Christmas, is now being distributed by the Electric Housewares Section of NEMA.

The large two-color merchandiser puts into dealers hands the necessary promotional tools and know-how for implementing the industry-sponsored campaign on the retail level. It includes such merchandising aids as easy-to-make seasonal displays, ways of setting up an electric housewares gift section, a year 'round promotional calendar and item check list, photographs of successful window displays, and easy-to-follow gift wrapping instructions.

The new merchandiser marks

30 YEARS FOR DOMINION—Benjamin Shaffer and Nathan Lifson, owners of Dominion Electric Co., electrical housewares manufacturers, were honored on the firm's 30th anniversary at a dinner recently in conjunction with the Housewares Show. Shown at the head table, left to right, are Robert Shaffer, vice-president; Benjamin Shaffer, president; Nathan Lifson, treasurer; and Burton Lifson, vice-president.

the current phase of the year round campaign, which is backed by industry members through consumer advertising, radio, television and publicity. Dealers may order copies of the merchandiser at 50 cents each from: Electric Housewares Section, National Electrical Manufacturers Association, 155 East 44th St., New York 17, N. Y.

News and views from the wholesalers

Curtis Musgrove, owner, Curtis Musgrove Co., Dallas, Texas—"We have opened a new Fort Worth, Texas, office with headquarters at 803 Continental Life Building. Jack R. Hamilton, who covers West Texas for us, is in charge of the new office."

•

G. A. Lindamood, vice-president and secretary, Interstate Hardware Co., Inc., Bristol, Tenn.—"Business is only fair in the electrical supply end. Some items are becoming hard to get.

"Appliance sales are improving, although still below normal. Dealer, distributor, and manufacturer inventories are being reduced on appliances. We believe that the appliance market will be firm by the end of 1951.

"Effective August 1, several executive changes were made in our organization. The executive staff now includes the following: J. T. Cecil, chairman of the board; O. R. Galliher, Jr., president and treasurer; G. A. Lindamood, vice-president and secretary; H. W. Shumaker, vice-president; and C. B. Moore, vice-president."

•

S. D. Wooten, III, purchasing agent, W & W Distributing Co., Memphis, Tenn.—"Things have been slow in the service trade due to the fact that television set sales have dropped considerably. Industrial business has been coming along very nicely; especially as far as the government is concerned.

"In our part of the South, the fall buying power is largely dependent on the cotton crop. This year we are having the largest crop since 1937, about 17 million bales. At the present time the price of cotton is very low, even below parity, but if the price of cotton reaches about 40 cents per pound, this part of the country will have one of its largest seasons ever.

"In the past month our company has taken on some new lines to better serve our industrial and broadcast customers in this area. Among these are Victoreen nuclear equipment, Superior power regulating equipment, Ampex tape recorders, American Beauty soldering equipment, and Telex aviation headphones."

Joe H. Williams, president of Joe Williams Electric Co., Jackson, Miss., is shown here at left with Joe Malouse, of Hunter Fan and Ventilating Co. On this trip to North Mississippi, Mr. Williams reports, $3,000 worth of fans were sold while the area had its heaviest snow for years. Mr. Williams was recently appointed to the Conduit Fittings and Box Committee of the National Association of Electrical Distributors.

J. H. Williams, president, Joe Williams Electric Co., Jackson, Miss.—"Business has been above last year's dollar volume at this time. We have only two more months in our fiscal year, and our business should show about ten per cent gain in dollar volume. We are in better shape than at any time since we have been in business.

"Our main headquarters is at 231 S. West Street, just two blocks from the heart of Jackson, with a complete house that features several hundred lighting fixtures. Ray Finley is our lighting fixture engineer.

"We have acquired property two blocks south of our present location where a new and complete building will be built to house our lighting fixture display and wiring devices under one roof. Approximately 20,000 square feet of floor space will be built on the 200 ft. by 200 ft. site.

"Among the new lines added recently are Admiral and Sew Gem sewing machines."

•

M. O. Hollis, secretary-treasurer, Raybro Electric Supplies, Inc., Tampa, Fla.—"Several important changes were made in our organization recently. W. W. Faulkner, who has for the past year been manager of our Orlando branch, has been appointed manager of apparatus, industrial, and utility sales for the north and central Florida and southern Georgia territories.

W. W. Faulkner

"Succeeding Mr. Faulkner as Orlando branch manager is W. T. (Bill) Brown, who joined Raybro in 1939 and has served in numerous capacities since that time. Other new appointments are: W. J. (Billy Jim) Bryant, Orlando branch sales manager; John Cowart and J. R. (Bob) Childers, salesmen, working territory out of Orlando branch office."

NEW HOME FOR PORTER BURGESS — Three times as much space is available in the recently completed home of Porter Burgess Co., in Dallas, as was available in the former location occupied by this North Texas appliance distributing firm. In addition to warehousing space, this 20,000 sq. ft. modern structure includes a display room and auditorium that will seat 200. Principals of the company are Porter Burgess and his son and partner, V. N. Burgess. C. G. Adair is sales manager.

Names and Faces

Roy C. Forward, for the past year assistant manager of the Memphis district office of **International Harvester Co.,** has been named Southern regional refrigeration representative. The announcement was made by **B. H. Bagby,** IH Southern regional manager, Atlanta.

In his new position, Mr. Forward will co-ordinate refrigerator and freezer sales and promotion activities of district offices and distributors in ten southern states.

•

C. E. Mighell has been appointed Nashville manager of major appliance sales for the **General Electric Co.,** according to an announcement by **H. A. Warren,** southeastern district manager.

Mr. Mighell, who has been a district sales representative in the southeastern district, came with the company in 1933. He has been in sales work for the company at Louisville, Cincinnati, Memphis, and Atlanta.

In his new capacity, he will represent all major appliance lines, but will have specific responsibility for home laundry equipment.

Two executive changes in the **Kelvinator** sales department were announced recently by **Charles T. Lawson,** vice-president of **Nash-Kelvinator Corp.** in charge of Kelvinator sales.

Mr. Lawson said that **H. A. Willis,** electric range and water heater sales manager, has been transferred to the advertising and sales promotion department as manager of national advertising, a new position "created in line with the increasing importance of television and all consumer advertising."

W. E. Saylor has been appointed electric range and water heater sales manager, in addition to his present duties as manager of rural and utility sales, Mr. Lawson said.

•

E. Alschuler, president, has announced the promotion of **E. G. May** to director of sales and **Robert B. Parks** to sales manager of the **Sentinel Radio Corp.**

Both executives will devote their activities to marketing and merchandising the full line of Sentinel television and radio receivers.

T. E. Wall, vice-president in charge of merchandising, **Dulane Inc.,** has announced the appointment of **Clarence Simms** as sales manager of the newly created Southern Division. This division will encompass the Mississippi Valley states south of South Dakota,

Clarence Simms

and from Texas to Florida along the Gulf coast. Mr. Simms will make his headquarters in Memphis.

Prior to joining Dulane, Mr. Simms was with a large radio distributing organization in St. Louis.

•

E. A. Seibert, Kelvinator director of parts and service, has relinquished this post after more than 25 years to take a special assignment on the staff of **C. T. Lawson,** vice-president of **Nash-Kelvinator Corp.** in charge of Kelvinator sales.

Mr. Seibert will act in an advisory capacity on parts and service in addition to other duties.

Mr. Lawson announced that Kelvinator will divide its parts and service operations into two separate departments. **Robert S. Geran,** assistant service manager, has been appointed service manager, and **Charles P. Eich,** assistant parts manager, has been named parts manager.

•

The appointment of **William J. O'Brien** as secretary of **Landers, Frary & Clark** has been announced by **Richard L. White,** president of the company. Mr. O'Brien succeeds **Francis L. Dabney,** who was also treasurer of the company.

Mr. O'Brien has been with Landers, Frary & Clark since 1927, when he handled various phases of accounting for the company.

•

Appointment of several regional managers to handle over-all supervision of sales, merchandising, and promotion activities on Arvin TV and radio has been announced by **Harlan B. Foulke,** vice-president of **Arvin Industries, Inc.**

Weldon Payne, who has served in an administrative capacity in the home office for the past year, now becomes

123
and you're IN
when you sell
State
WATER HEATERS
When your customer sees all THREE State Water Heater models — the Standard, the Low Boy, the Table Top . . . When your customer hears all NINE points which make State as fine as any water heaters at any price . . . When you show that low State price tag . . . Mister, you've made a water heater sale!
No matter what line you stock or plan to stock, it will pay you to investigate State water heaters and the NINE points which make State the easiest water heater in America to sell. Your letter will bring catalogue and the full State Story.
UL
STATE STOVE & MANUFACTURING CO.
509 25th Avenue N. Nashville, Tennessee

regional manager for the South and Southeast. A veteran of 18 years with Arvin, Mr. Payne was a district manager in the Middle West before his recent home-office tenure.

•

Parker H. Ericksen, director of sales for **Bendix Home Appliances Div. of Avco Mfg. Corp.**, has recently announced two southern appointments.

James G. Koontz, divisional manager of Bendix for Georgia, Florida, Tennessee, and South Carolina, has been named Central regional manager. Mr. Koontz replaces **Harold P. Bull**, who was promoted to sales manager for washers, dryers, and ironers.

Rocco N. Marsicano, district sales manager for Cain & Bultman, Inc., Bendix distributor at Jacksonville, Fla., has been appointed special representative for Bendix in the Southeast.

R. N. Marsicano

Mr. Marsicano will work with Bendix distributors and dealers throughout the southeastern United States.

•

Eugene H. Wilson has joined **Schiffer Distributing Co.**, Atlanta, as sales manager. Schiffer is distributor in Georgia and north Florida for **Stromberg-Carlson** radio and television sets.

Before his new appointment, Mr. Wilson had been for the last four years territorial representative with Florence Stove Co.

•

Porter Burgess Co., Dallas, Texas, has announced the appointment of **Dwight McAnally** as advertising and promotions manager. Mr. McAnally was formerly connected with Dearborn Stove Co.

Small-community selling

(Continued from page 120)

the Irving trade territory.

Davis declined to be awed by the presence of at least eight competitors within the limits of Irving, the proximity of a metropolis, and the traditional addiction of local prospects to do their shopping in the city nearby.

Instead, he treated nearby Dallas as an advantage and an outlet for part of his volume, and this, too, was done by using the user.

"With what it has to offer in the way of industries and manufacture," Davis explained, "Irving could not support its population, and the fact is that a great many Irving residents are employed in Dallas. These people tell their business associates and acquaintances about our store and our service. And having a good name at home gets us that additional business out of Dallas.

"We are glad to get that business. For although we get our share of the Irving business, it is doubtful that we could get enough additional business here to equal what goes to Dallas. And if people didn't think very well of our store, the way we do business and our service policy, we wouldn't get the Dallas business.

"Then, too, some Dallas buyers just happen in, you might say, looking for appliances that sell faster than they arrive in Dallas, such as double-door boxes and the better electric ranges."

Davis says the electric range is constantly growing in popularity, that once sold, a housewife will have no other kind and that he sells three electric to one gas range. Last year he sold 175 boxes, but estimates that at least half of his merchandising effort was expended in getting the merchandise to sell.

That is only about half the refrigeration volume of some big Dallas institution, but Davis would not trade his place for any of the big ones in the big city.

"Overhead is not nearly so high," he comments; "pressure is not nearly so terrific. I know just about everybody and his dog and I think we're doing a good job. The way I see it, if you satisfy your friends and all the people you know, you're doing a good job."

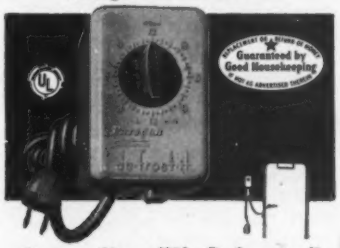
Loyd Davis is a converted power company employee, and before entering business in Irving had spent 19 years, all of it in the smaller communities around Dal-

Here's RED-HOT Proof

that more women want

AUTOMATIC DEFROSTING

than any other refrigerator feature!



Survey Shows "No Defrosting" as Top Vote Getter

Asked by a leading woman's magazine* what features they wanted most in a refrigerator, 10,000 readers voted for "Automatic Defrosting" as most popular choice. Here's concrete proof that housewives are sold on automatic defrosting, and this creates a tremendous market for you — *no matter what make of refrigerator you sell!* For now you can offer simple, clean, worry-free defrosting for *any* refrigerator, new, or old, with Paragon's performance-proved "de-frost-it"!

*name on request.

The Only Automatic Defroster Sold Exclusively through Established Retailers

Paragon de-frost-it

DEFROSTS . . . WHILE YOU SLEEP

at $9.95 Complete — nothing else to buy.

"My de-frost-it does away with hand-defrosting mess and bother, saves me hours of time, keeps food longer — cuts down electric bills and refrigerator wear. No wonder I'm sold on the Paragon de-frost-it!"

- de-frost-it is the only complete unit . . . hung anywhere . . . no installation . . . no extra cord to buy.
- de-frost-it is completely performance proved . . . hundreds of thousands of satisfied users.
- de-frost-it is made and backed by the world's largest exclusive manufacturer of time controls.
- de-frost-it is backed by aggressive national advertising . . . reaching over 7,000,000 prospects . . . month after month.
- de-frost-it merchandising plans . . . sales policies . . . dealer aids help you cash in on customer demand.

PARAGON ELECTRIC COMPANY

1618 TWELFTH STREET • TWO RIVERS, WIS.

las, as part of the organization of the Texas Power and Light Company. His work involved an extensive amount of appliance merchandising.

Slightly more than five years ago he concluded that if he could make money for the company, he could make money for Davis. Knowing the territory, he chose Irving; and being favorably known to manufacturers, he had no difficulty landing the franchise of his choice.

Refrigerator rebuilding

(Continued from page 119)

conditioned by one method or another, and all at a profit.

As a result, the Arrow organization has the reputation of a store that always has a good reconditioned refrigerator. They do so large a used-refrigerator volume that it is often necessary to go out into the market and purchase them for rebuilding.

The Lowther brothers got their start in the trade-in field back about the time the organization was founded, when they had a contract with Laclede Gas & Light Company, gas utility, to take all trade-in refrigerators received.

These were rebuilt, refinished, and resold through the originally small store, which has now expanded into a large modern appliance store.

The salesman's confidence

(Continued from page 121)

varies with circumstances, and may range from one week to one month. If, at the end of that time no sale has been forthcoming, we turn the card over to a specialist in whatever appliance is involved, with instructions to follow up.

Eventually, we will sell 75 per cent or more of the prospects who are listed on protection cards —even if it requires the assignment of three different salesmen to make the sale.

We try to give our servicemen incentive, too. We have four servicemen on the job, all of whom are expected to make a minimum number of calls per day. Under normal conditions, they must make eight repair calls per day, and they receive $1.75 for each additional call.

Thus, if a serviceman digs in and makes 11 or 12 repairs in a single day, he is receiving a worth-while sum for all of the extra calls. Often our servicemen can be depended upon to work late into the evenings to capitalize on the offer.

We give our salesmen the benefit of the best possible training, even if it requires sending them to the factory or paying the expenses of a professional demonstrator to visit the store. If our salesmen are having financial difficulties, we have an employee deposit system which helps.

By far the simplest, most effective means of obtaining hard work from the salesmen, we have found, is by paying a special premium commission for selling a slow-moving appliance.

For example, during one month, salesmen received an additional $10 bonus for every refrigerator sold of the 8-cubic-foot capacity level. We found that our inventory was growing heavy in these larger-size boxes, primarily because we were selling smaller boxes to apartment dwellers and new home owners.

Through these simple premium bonuses applied to slow movers, we have been able to sell an accumulation of small-size home freezers, a lesser-known brand of washing machine, and quite a few higher-priced large refrigerators.

We use very few stunt promotions or team contests, as we feel that the salesman who always comes in last gets discouraged, unsure of himself, and is willing to quit.

Instead, every salesman gets the same break and additional help where it is needed.

TV service calls

(Continued from page 123)

er is impressed with the things he should not do, such as fiddling with the controls at the rear of the set, and attempting to make adjustments himself. Our own repairs can be carried out much more efficiently if the customer followed the suggestions in the letter."

The television set owner who needs service, and who telephones in to demand it, is a ticklish customer, Mr. Weinberger said. "Such set owners are never concerned with the fact that the repair department is already behind schedule, and that many other sets are awaiting service ahead of him," he stated.

"All he is interested in is getting his set back into action immediately. Therefore, anything which contributes to this is good merchandising."

Fourth quarter prospects

(Continued from page 124)

ance brands, together with outstanding improvements made in recent years, make kitchen and laundry equipment an excellent investment now, appreciably below the over-all cost-of-living index, Nance said.

Nance stamped the growth in sales of complete kitchens and home laundries, especially in

DAVIS
Headquarters FOR
ELECTRICAL CORD SETS
"WRIST ACTION" CORD SET
Wireless swivel plug turns, bends, swings, spins — eliminates all cord wear, 95% of all cord troubles. Exclusive, patented design. A proven seller. Attractive display card free.
RANGE CONNECTORS
Finest quality cord and receptacles, including new flush range receptacle. Underwriter's Approved. 220 volt, 50 amperes. Eliminates costly electrical work in connecting ranges.
See your jobber or write direct for full details and prices.
DAVIS Mfg. Company
PLANO 1, ILLINOIS
Southeast Rep. H. K. Dewees Co. Walton Bldg. Atlanta, Ga.
Southwest Rep. M. C. Huie Co. Thomas Bldg., Dallas, Tex.

newly constructed homes, as the factor that completely changed the appliance industry following World War II.

A concurrent consumer study brought to light that many families plan kitchen and laundry appliance purchases following the summer vacation period now ending.

Price-cutting

(Continued from page 122)

a quarter-page ad of newspaper advertising, and often full pages. In every instance, the Snook trademark is emphasized over the product advertised.

As a result, after five years of promoting the slogan and the trademark, we feel that the Charlotte resident will readily recognize a Snook truck, a Snook billboard, or a Snook newspaper ad, without difficulty.

From time to time, we tie up additional slogans with the trademark, such as "Shop where you can select from a complete display"; "Value is the thing that counts at Snook Bros."; "It is so easy to shop at Snook Bros."

We back up the slogan with a complete display of appliances in several national brands, a complete service department, and a staff of trained, high-type salesmen.

We do no outside selling whatsoever. Instead, we maintain a handsome, eye-appealing store, budget 2½ per cent or more advertising, and let reputation do the rest.

We have ignored the practice of granting too large allowances on trade-in refrigerators, which is a simple means of price-cutting.

In our own case, we traded in 250 major appliances of various types during 1950, but we actually made a profit on all of these, even after crediting the service department, at the same rates charged to the public for the reconditioning work involved.

While the profit was small, less than 10 per cent, it nevertheless allowed us to maintain a clean markup on our new-appliance business. Here again, the Snook name, and the prestige which it carries, made it possible for us to sell trade-in refrigerators at prices as much as $25 above the average market price, merely because the Snook guarantee was attached.

From time to time, a competitor may cut prices and boost his sales briefly on a particular appliance. We have never attempted to meet such competition. We explain to customers that we have no intention of doing so, and that our reliable service and dependable name offset any few dollars which they may save through a competitive price reduction.

We are pleased with the fact that most customers accept this statement.

Model kitchens

(Continued from page 116)

a third.

"It is not unusual for us to line up an order for 800 appliances in a good-sized project, chiefly because the contractor had appreciated our model-kitchen service."

Now, Sharpe - Wheyland's "dream kitchen" is a valuable asset the year-round, rather than merely being held in reserve for cooking school demonstrations. The store has not had a cooking school for more than 18 months, and if present success in the new-home - builder field continues, there will be none, Mr. Wheyland stated.

Clayton Sharpe and Ed Wheyland built one of Mobile's largest and most beautiful showrooms in 1945, incorporating among its assets a striking model kitchen at the rear of the home-appliance showroom.

Large, colorful, the model kitchen was equipped with two of everything, including cabinet sinks, automatic dishwashers, automatic laundry equipment, refrigerators, and ranges,.

A lot was expected from the model kitchen, not only in the sale of complete planned kitchens, but also in the promotion of individual appliances, demonstrated by an expert home economist to groups of housewives.

But until about a year ago, Sharpe-Wheyland was forced to consider its model kitchen merely an expensive burden.

Fowler backs you up

...and never lets you down!

YOU CAN COUNT ON IT!...

Every time you sell a glass-lined Fowler water heater you're sure of *right performance*. And that means *more profitable sales for you.*

GLASS-LINED PROTECTION! **A FOWLER FIRST! Smooth, durable porcelain bonded to steel inside the tank, prevents rust and corrosion, regardless of water conditions. Water is *rust-free*, because tank is *rust-proof*.**

Fowler offers features galore

Gas **WATER HEATERS**

Extra-Heavy Insulation. 2½-in. thick Fiberglas blanket, from top to bottom of heater, keeps water hot longer.

Snap-Action Thermostat; easy temperature adjustment.

Over-sized Tapered Heat Flue supplies 8% more heating area than flues most commonly used.

Economy, One-Piece Drilled Raised Port Burner, burns all gases cleaner.

AGA Approved.

Capacities: 22, 30, 35 and 45 gallons.

Electric **WATER HEATERS**

Patented 3-Way Built-in Insulation. Dead air space; aluminum reflector jacket; 3-in. Fiberglas.

Easy-Adjustable Automatic Temperature Controls.

Safe "Black Heat" lock-on, external-type elements provide efficiency, long life.

Copper Heat Trap eliminates wasteful hot water circulation in plumbing system.

U.L. Approved.

Capacities: 5 to 80 gallons. (Table Top models: 30 and 40 gallons.)

WARRANTY! **Gas heaters and electric heaters carry 15-year and 20-year prorated warranties, respectively. More assurance of Fowler backing.**

PRICED RIGHT! **Fowler is economically priced in order that dealers may enjoy quick and profitable sales.**

Sell Fowler *Glass-lined* water heaters

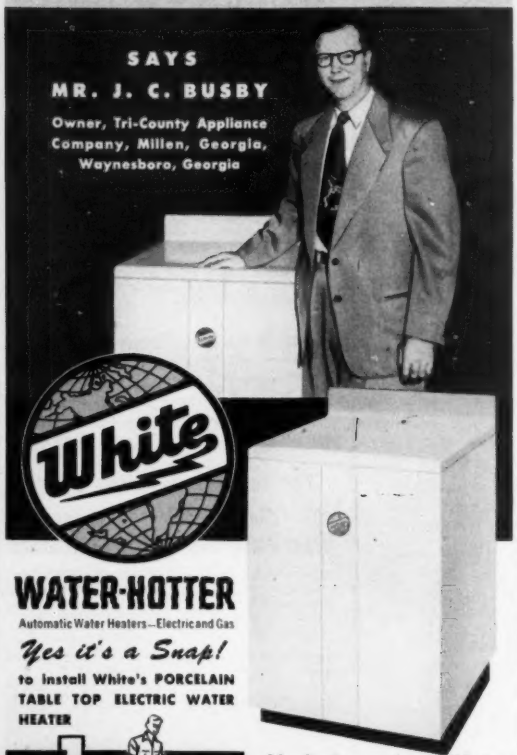
Manufactured by

FOWLER MANUFACTURING COMPANY

2545 S. E. GLADSTONE, PORTLAND 2, OREGON

"Both in sales and installation White makes it a SNAP!"

SAYS
MR. J. C. BUSBY
Owner, Tri-County Appliance Company, Millen, Georgia, Waynesboro, Georgia



White

WATER-HOTTER
Automatic Water Heaters—Electric and Gas

Yes it's a Snap!
to install White's PORCELAIN TABLE TOP ELECTRIC WATER HEATER

Mr. Busby continues: *"It is a pleasure for us to cooperate with . . . the manufacturers of White water heaters in any way to further promote this good product."*

The sincerity of this good dealer's statement, the honest designation of the *White* WATER-HOTTER as "a good product" are matched by the integrity with which *White* builds both the product and its market. For *White's* complete Proved Profit Story, contact your *White* distributor or write *White* TODAY!

WHITE PRODUCTS CORPORATION
Water Heating Specialists Since 1930
DEPT. S-10—MIDDLEVILLE, MICHIGAN
EXPORT SALES DEPARTMENT: 201 N. Wells St., Chicago 5, Ill.

Electric
Round and table top models

or Gas
Round models only

Patented Copyright 1951, White Products Corp.

Index of ADVERTISERS

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"We had a lot of reasons to consider the kitchen a loss," Mr. Wheyland said. "As soon as we began setting up cooking schools, which required the cost of food, hiring of a demonstrator, clearing out the showroom to seat 150 or 200 people, we discovered a few disadvantages.

"For example, during one three-day cooking school, designed to bring in a different group of women each day, we found that there was little or no turnover. The same housewives were coming back day after day to enjoy an afternoon's entertainment, compete for prizes, eat the food, and otherwise have a good time for themselves.

"In these events, we found that we were providing entertainment for many women who obviously forgot all about us as soon as they left the showroom."

One experiment after another with cooking schools soon convinced the Mobile partners that they were barking up the wrong tree. So for more than two years the impressive model kitchen was maintained as a selling tool for the company's three outside salesmen.

"Of course it was valuable to us in that way," Mr. Wheyland stated, "but we would hardly have made the investment merely on this basis."

Low-priced appliances

(Continued from page 115)

He recalls, however, that some of his competitors who criticized his credit policy before Regulation W was reactivated, now complain of the regulation's restrictions.

Bourland admits that his salesmen are making more money this year because, for one thing, there are fewer salesmen to share total sales proceeds. He adds:

"We have 22 salesmen now and could use more, preferably inexperienced men. Too many experienced men think they know all the answers.

"Yes, there are fewer salesmen and a much smaller staff in the service department. We sometimes get crowded in the service department, but we've been getting along fine with a reduced sales department and having lots of fun licking our problems.

"I don't mean that it's been play. Salesmen have had to work harder; everyone has worked harder. We stay open 12 hours a day, six days a week. And from 8 to 9 in the morning, six days a week, salesmen from all three stores congregate here at the main store for a sales-training session.

"We take up one product at a time and, naturally, have given considerable attention to the smaller-priced items we have been promoting. Salesmen have learned that if they can't sell the big-time items, they can make as much or more with harder work on smaller items.

"And it has been very good experience, all around, for all of us in the institution — promoting and selling the smaller-priced items we had been neglecting."

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Pictured: Mitchell-Neilson Elem. School
Steinbaugh & Wheeler Architects.

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New *Fixtures to the Glatthar Line*

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No. 1539

No. 1540—8"
No. 1541—10"

This square kitchen unit comes in two sizes. A big seller at a popular price.

The fixtures shown above and other new units for 1952 are shown in a supplemental sheet to the Glatthar Catalog in full color. Don't miss these new numbers.

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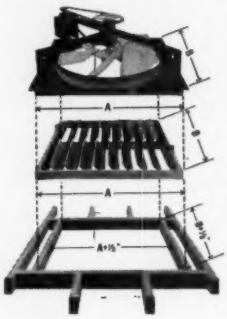
Model RVU-36:
Measurement A—42"
Measurement B—42"

Model RVU-42:
Measurement A—48"
Measurement B—48"



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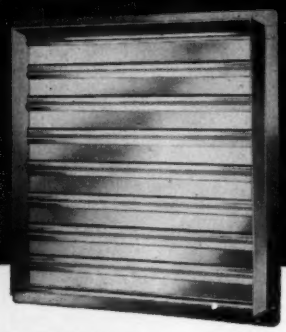

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IT TAKES THE LOAD OFF THE FAN!

Aluminum louvers open fully, permitting capacity fan operation. New heavy reinforcement strip adds strength and long life to the louvers, assures quiet operation and perfect counterbalance, prevents rattling. Deep shrouds protects shutter from high winds. Tie-rod, brackets and bearings inside frame, not exposed to weather. Special finish resists corrosion. Many other features.

WRITE FOR NEW AIR-FLO CATALOG 43-B
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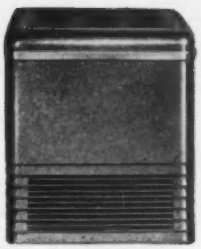

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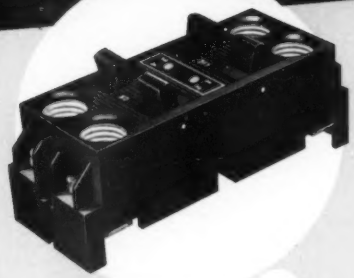

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